HUMAN DEVELOPMENT REPORT OF NORTH EAST STATES

DECEMBER, 2011

सत्यमेव जयते

Government of India
Ministry of Development of North Eastern Region
New Delhi
Website: www.mdoner.gov.in

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पबन सिंह घाटोवार
Paban Singh Ghatowar

सत्यमेव जयते

राज्य मंत्री (स्वतंत्र प्रभार)
उत्तर पूर्वी क्षेत्र विकास मंत्रालय एवं
संसदीय कार्य राज्य मंत्री
भारत सरकार
Minister of State (Independent Charge)
Ministry of Development of North Eastern Region &
Minister of State for Parliamentary Affairs
Government of India

FOREWORD

The development in a country should ideally be viewed and assessed in terms of what it does for its people –the benefits and opportunities it generates and improvements in their well being. Experience has shown that nations with high levels of income and economic growth need not have similar social attainments. It has been more than two decades, since the United Nations Development Programme (UNDP) developed the framework of a composite Human Development Report, shifting attention from Gross Domestic Product to multi-dimensional variables in measurement of development.

The goals of human development, however can be achieved only through inclusive development and bridging the various divides that afflict our country: differences across regions and states; rural-urban India; gender divide and among social groups. There is also a divide between those who have access to essential services such as health, education, drinking water, sanitation etc. and those who do not. The government is seized with a sense of urgency to disperse growth and development to all parts of India.

I am happy to present the Human Development Report of the North East States. The Report is an attempt to evaluate the performance of North East States in recent times on sectors having direct impact on human development such as health, education and basic amenities like drinking water and sanitation.

Data gaps in some indicators of the study has been a constraint. The Human Development Report of the North East States has employed available data and where the relevant data for generally accepted variable is un-available, an alternative data is used to proxy the variable. We hope that the present report will, with all its infirmities, is able to capture the diversities amongst the States in the North Eastern Region under individual indicators/variables. The Central Government and the North East State Governments need to take cognizance of these gaps and take necessary steps in planning, policies, programmes to bridge the same.

(Shri Paban Singh Ghatowar)
Minister of DONER
December, 2011

Room No-258, Vigyan Bhavan Annexe, Maulana Azad Road, New Delhi-110011
Tel.: 011-23022400, 23022401, Fax : 011-23062754

जयति चन्द्र, भा.प्र.से.
सचिव
JAYATI CHANDRA, I.A.S.
SECRETARY
Tel.: 011-23022020
Fax : 011-23022024
E-mail : secydoner@nic.in

सत्यमेव जयते

भारत सरकार
उत्तर पूर्वी क्षेत्र विकास मंत्रालय,
विज्ञान भवन एनेक्सी,
मौलाना आजाद रोड़, नई दिल्ली–110 011
Government of India
Ministry of Development of North Eastern Region
Vigyan Bhavan Annexe,
Maulana Azad Road, New Delhi-110 011

PREFACE

The North East Region is one of the most challenging Regions of the country in terms of delivery of services & access to growth opportunities. The Central government has been trying to devise concerted ways to fast track economic growth in the Region. A number of special schemes and programmes have been evolved for the Region through the provision of select Central Ministries earmarking 10% of their plan funds for utilization towards the development of the NE Region.

The process of development has come be viewed and assessed in terms of what it does for the individual. In India, the National Human Development Report (NHDR) 2001 of Planning Commission and Gendering Human Development Indices (GHDI) 2009 of the Ministry of Women and Child Development are embodiment of this approach.

The Ministry of DoNER has come out with the Human Development Report of the North East States based on the methodologies adopted by previous reports cited above. An attempt has also been made to rank North East States in terms of a composite index employing available data and where the relevant data for generally accepted variables is un-available, an alternative data has been used to proxy the variable

In general, the North East States are perceived to be doing fairly well in the broad dimensions of human development as compared to States in other regions of the country. **Ironically, as one delves deeper, the picture is startling in its revelations calling for more focused remedial actions and targeted interventions for e.g. despite the NER being abundant in fruit and vegetable production, the states of Assam, Tripura and Sikkim have high percentage of anaemic women. The high percentage of school drop out rate at the elementary level in 6 out of 8 North East States inspite of higher literacy levels; the consistently higher Maternal Mortality Ratio of Assam compared to national averages are other examples. While the HDR of North East States contains State level analysis, the perusal of district-wise total literacy rates within a State, shows a wide variation, the range being more than 36 percentage points.**

It gives me great happiness to present the Human Development Report of the North East States. The Report shall be of help to the Central Ministries of HRD, Health and Family Welfare, Drinking Water & Sanitation and Power, in better targeting of schemes and projects in these States in order to reduce inter and intra-State disparity. The write-up as well as the extensive data base at two points of time (including latest Census (2011), SRS & NSSO data) in terms of gender as well as rural-urban dimension will serve as a useful guide in formulation of various development policies of the Government of India.

I commend the sincere efforts that Smt. Kirti Saxena, Economic Adviser and Shri K. Guite, Director have put into preparing this Report and the dedicated hours that have gone into its preparation.

J. Chandra
24/11/11

(Jayati Chandra)

CONTENTS

CHAPTER 1
HUMAN DEVELOPMENT INDEX OF THE NORTH EASTERN STATES

1. INTRODUCTION

The measurement of human development using a composite index called Human Development Index (HDI) has gained popularity since the United Nations Development Programme (UNDP) devised and launched it in 1990 with the objective that the focus of development economics should shift from national income accounting to people centred policies. In India, the National Human Development Report (NHDR) 20011 of Planning Commission and Gendering Human Development Indices (GHDI) 20092 of the Ministry of Women and Child Development have developed State-level composite indices for human development, human poverty and gender empowerment. This report is an attempt to evaluate the performance of North Eastern States in recent times on sectors having direct impact on human development such as health, education and basic amenities like drinking water and sanitation. In the first Chapter we construct Human Development Index of North Eastern States for two points of time viz., 1993-94 and 2004-05, based on the methodologies adopted by previous reports cited above and the HDI of UNDP. The subsequent Chapters give detailed discussion of the performances of the North Eastern States on key social sectors having direct bearing on human development.

This report attempted to construct HDI for the North Eastern States by employing available data and where the relevant data for generally accepted variable is un-available, an alterative data is used to proxy the variable. At the outset we have no reason to believe that this technique will be superior to data extrapolation adopted by previous reports. But we hope that it will, with all of its infirmities, be able to capture the diversities amongst the States in the North Eastern Region.

2. A BRIEF REVIEW OF NHDR 2001 & GHDR 2009

There are scores of economic and social indicators which have been used to measure different aspects of socio-economic progress. The Human Development Index (HDI) is a composite index developed to measure the average achievement in basic dimensions of human development. These basic dimensions, as defined by UNDP3 are – a long and health life, knowledge and decent standard of living. While there exists a general consensus on these core dimensions, there could be slight variations in the choice of indicators depending upon the focus and also on availability of feasibility data. The core dimensions and their respective indicators employed by the National Human Development Report (NHDR), 2001 and Gendering

Human Development Indices (GHDI), 2009

Table 1.1: National Human Development Report (NHDR), 2001

Dimensions	Indicators
1. Longevity	(a) Life expectancy at age one (b) Reciprocal of infant mortality rate
2. Education	(a) Literacy for the age group 7 years and above (b) Adjusted intensity of formal education
3. Command over resources	(a) Inflation and inequality adjusted per capita consumption expenditure

Table 1.2: Gendering Human Development Indices (GHDI), 2009

Dimensions	Indicators
1. Long and healthy life	(a) Life expectancy at age one (b) Reciprocal of infant mortality rate
2. Knowledge	(a) Literacy for the age group 7 years and above (b) Mean years education for 15+ age group
3. Decent standard of living	(a) Estimated income per annum

are given at Table 1 and Table 2 :

Both NHDR 2001 and GHDR 2009 have assigned equal weights to all the three dimensions and all the indicators. The goal posts, i.e., the maximum and minimum values for the dimensional indicators, adopted however differ between these reports understandably because these are determined by the underlying prescriptive norms which each of the reports has espoused.

3. HUMAN DEVELOPMENT INDEX OF NE STATES

This report attempted to prepare Human Development Index of the North Eastern States at two points of time viz., 1993-94 and 2004-05. The methodology adopted in this report is based on the UNDP and hence, closely similar to the NHDR 2001 and GHDI 2009. However,

Table 1.3: Dimensional Variable and Goal Posts

Dimensions	Maximum	Minimum
1. Quality of life		
1.1 Reciprocal of crude death rate (per 1000 population)	15	0
1.2 Reciprocal of infant mortality rate (per 1000 live births)	100	0
2. Quality of opportunity		
2.1 Literacy rate for 7+ age group	100	0
2.2 Mean year of education for 15+ age group	15	1
3. Economic well-being		
3.1 Inflation adjusted per capita consumption expenditure	5000	250
3.1 Inflation adjusted Per capita NSDP	50000	5000

since life expectancy data is not available for all the NE States excepting Assam, we adopted Crude Death Rate as a proxy for life expectancy in view of the fact that there exists strong correlation between the two. The dimensions, variables and goal posts adopted in this study are given table 1.3.

3.1 Dimensional variables and goal posts

Quality of life: Longevity or long and healthy life is a core dimension adopted by UNDP, NHDR 2001 and GHDI 2001. The most acceptable dimensional variable is life expectancy at birth or at age 1. Unfortunately, we do not have life expectancy data for the North Eastern States, excepting Assam. Therefore, crude death rate [CDR] and infant mortality rate [IMR] are employed as dimensional variables for quality of life, which we believe will capture certain aspects of healthy life even when it may not be taken to capture longevity per se. We are aware that employing these two variables together is definitely not desirable because of the high correlation coefficient between the two (0.95 for 1993-94 and 0.61 for 2004-05). At the same time, none of them individually seem to be sufficient to capture the dimension. Hence, we admit that the choice of these variables is dictated solely by data constraint. To remedy, at least to some extent, IMR is assigned more weightage (2/3) than CDR (1/3). The choice of goal posts is determined by considerations such as the value for best performing State and ideal condition. The data source for IMR is the NFHS-1 (1992-93) and NFHS-3 (2005-06) and CDR is SRS (19991-92) and SRS (2006).

Quality of life index (x1) = 1/3 (CDR) + 2/3 (IMR) (1)

Quality of opportunity: Education or knowledge is a core dimension of human wellbeing because it provides the opportunity to an individual to live a productive and socially meaningful life. Adult literacy rate is considered the ideal variable. Both NHDR 2001 and GHDI 2009 have used 7+ literacy rate. Additional variables such as intensity of formal education or mean years of education for 15+ age group have also been employed. In this report we used Census literacy rate (7+ age group)4 [LIT] and mean year of education for 15+ age group [MYE] calculated by GHDI 2009 for 1993-94 and 2004-05. Mean years of education has been assigned more weightage (2/3) than literacy rate (1/3). The goal posts assigned to these variables are in line with those adopted by GHDI 2009.

Quality of opportunity index (x2) = 1/3 (LIT) + 2/3 (MYE) (2)

Economic wellbeing: This dimension is meant to capture standard of living or command over resources. Different variables such as per capita GDP (UNDP index), per capita consumption expenditure (NHDR 2001) and estimated earned income (GHDI 2009) have been employed. This report employed per capita income (NSDP) at 2004-05 prices [PCY] and inflation adjusted consumption expenditure [PCE] to capture economic wellbeing. Though these two variables are presumed to be highly correlated, it is found that the actual coefficients of correlation were 0.54 in 1993-94 and 0.49 in 2004-05. This clearly showed that the divergence between per capita expenditure and per capita consumption expenditure has widened in recent times and hence, the two variables are required to moderate the dimensional index. In assigning the goal posts, maximum values are selected with the view that they support intertemporal comparison over reasonable period of time and minimum values are determined simply by looking at the minimum values for worse performing State. Per capita consumption expenditure has been assigned more weightage (2/3) than per capita income (1/3).

Economic well-being index (x3) = 2/3 (PCE) + 1/3 (PCY) (3)

Once the dimensional indices are prepared, Human Development Index (HDI) is calculated simply by taking the average of these index values. Though there can be difference in opinion over weights to be assigned to these dimensional indices, usually all the indices are assigned equal weight. In the same manner we also assume that the three dimensional indices are equally important. Hence,

HDIj = 1/3∑(xi) (4)

Where HDI is for jth State, j goes from 1 to 8 and,
xi is ith dimensional index, i goes from 1 to 3.

4. RESULTS

State-wise scores in each of the dimensional indices and HDI values can be seen at Table 4 below. The HDI scores of each of the States for 2004-05 has clearly divided the eight North Eastern States into two distinct groups of four States each. The first group which scores more than 0.5 are Mizoram, Nagaland, Manipur and Sikkim and the second group which scores less than 0.5 are Arunachal Pradesh, Assam, Meghalaya and Tripura.

For the two points of time considered in the report, the States making up the two distinct groups remained the same, though there are slight changes within each of the groups. The State of Nagaland ranked first in 1993-94 but slides to rank No. 2 and Mizoram moves from second position in 1993-94 to rank first in 2004-05. The relative positions of States other than Mizoram and Nagaland have remained the same. (Table1.5)

What is more significant is the rate at which each of the States improve their scores in the HDI. While it is reasonable to assume that States which have achieved high level of human development in 1993-94 will experience smaller increase, it may also be seen from the perspective of economic reforms, in the sense that the year 1993-94 marks the initial period of economic liberalization while by the year 2004-05 the reforming States must have responded to liberalization with improved performance. The rate at which HDI scores improved between 1993-94 and 2004-05 also seem to reflect the economic performance of these States post liberalization.

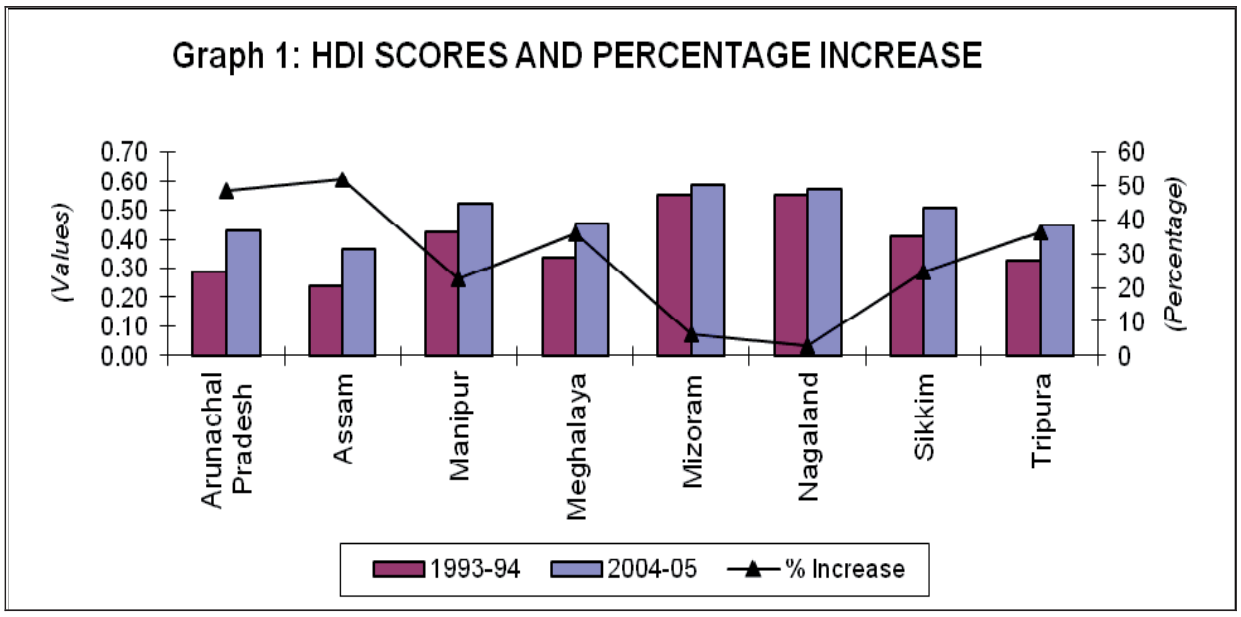
Table 1.4: Dimension-wise HDI Scores for 1993-94 and 2004-05

Sl. No.	States	1993-94				2004-05			
		X_1	X_2	X_3	HDI	X_1	X_2	X_3	HDI
1	Arunachal Pradesh	0.313	0.201	0.348	0.287	0.491	0.334	0.475	0.427
2	Assam	0.153	0.324	0.241	0.239	0.364	0.382	0.345	0.364
3	Manipur	0.593	0.419	0.265	0.426	0.706	0.487	0.369	0.521
4	Meghalaya	0.385	0.278	0.343	0.335	0.540	0.380	0.446	0.455
5	Mizoram	0.729	0.503	0.417	0.550	0.657	0.572	0.523	0.584
6	Nagaland	0.780	0.463	0.417	0.553	0.662	0.512	0.535	0.570
7	Sikkim	0.567	0.333	0.324	0.408	0.666	0.391	0.469	0.509
8	Tripura	0.330	0.354	0.297	0.327	0.534	0.415	0.390	0.447

Where X1 is Quality of life index; X2 Quality of opportunity index and X3 is Economic well-being index.

Table 1.5: HDI Scores and Ranks

Sl. No.	States	1993-94		2004-05	
		Value	Rank	Value	Rank
1	Arunachal Pradesh	0.287	7	0.427	7
2	Assam	0.239	8	0.364	8
3	Manipur	0.426	3	0.521	3
4	Meghalaya	0.335	5	0.455	5
5	Mizoram	0.550	2	0.584	1
6	Nagaland	0.553	1	0.570	2
7	Sikkim	0.408	4	0.509	4
8	Tripura	0.327	6	0.447	6



5. CONCLUSION

In general, the North Eastern States are perceived to be doing fairly well in human development as compared to States in other regions of the country. This study is limited only to allow comparison among the North Eastern States and between two points of time. While human development extends opportunity available to the people, in the context of NE region, widening the scope of economic opportunity within the region remains the major challenge to development policy-making. This concern takes us inevitably to the two-way causality between human development and economic growth, despite the fact that certain human development indicators may be the ends by themselves. In this context, the economic performance of States like Tripura and Sikkim in recent years takes their per capita incomes (NSDP) well above those of other North Eastern States. While it is true that income distribution pattern will determine the extent to which high per capita income will translate into human well-being, our results seems to suggest that growing income of these States have translated into improved performance in HDI scores.

1"National Human Development Report 2001", Planning Commission, Government of India, 2002.
2"Gendering Human Development Indices: Recasting the Gender Development Index and Gender Empowerment Measure for India", Ministry of Women and Child Development, Government of India, 2009.
3"Readings in Human Development" UNDP (eds.) Fukuda-Parr, Sakiko and A.K. Shiva Kumar, OUP, New Delhi, 2004.
4"Literacy rates since 1991 Census till date pertain to population of age group 7years and above.

CHAPTER 2
ECONOMIC ATTAINMENTS AND WELL-BEING

1. INTRODUCTION

Conventional indicators of economic performance like per capita income and per capita GDP have been considered inadequate for the measurement of social as well as individual economic attainments and well-being. Since these conventional indicators rely heavily on market mediated transactions, goods and services which are not marketed but are vital for individual well-being have not been captured in the process. The inclusion of economic indicators such as per capita income and per capita GDP in composite human development indices, despite their limitations, is explained on the ground that they are indirect but good measures of other valued attainments. These economic indicators are also useful in capturing the stock of available resources or means that, in a sense, facilitate other attainments for individuals and the society at large. In this Report, both per capita income and per capita consumption are used with assigned weightage of 2/3rd and 1/3rd respectively.

2. PER CAPITA INCOME

Per capita income is the average Net State Domestic Product (NSDP). It does not measure the well-being of individuals of the State, but is considered an important means by which individuals can improve their economic attainments and well-being. The per capita income of NE States is given table 2.1.

The purpose of the above table giving per capita NSDP of different base years at current prices is to merely exhibit the per capita income of NE

Table 2.1: Per capita Income of North Eastern States
[NSDP at current prices]

(Rupees)

States	1993-94 (1993-94 base)	1999-00 (1999-00 base)	2004-05 (2004-05 base)	2009-10 (2004-05 base)
1. Arunachal Pradesh	8733	13990	27271	51644
2. Assam	5715	12282	16782	27197
3. Manipur	5846	13260	18527	28531
4. Meghalaya	6893	14355	23793	42601
5. Mizoram	8319	16443	24662	45982
6. Nagaland	9129	14107	20234	22418*
7. Sikkim	8402	14890	26693	48937
8. Tripura	5534	14119	24394	35799
India per capita NNP	**7690**	**15839**	**24143**$	**33731**$

** The figure pertain to* 2007-08.
$ The figures pertain to Net National Income (NNI)
Source: CSO, State Domestic Product (State Series), Ministry of Statistics & Programme Implementation CSO

States vis-à-vis the national per capita income at different point of time. A remarkable feature is that the number of States having per capita income above the national average declined from four in 1993-94 to just one in 1999-2000 and increased to five in 2009-10. This indicates that North Eastern States, in general, have recovered from the adverse initial impact of economic liberalization.

3. Per capita consumption expenditure

Per capita consumption expenditure is considered a more preferable indicator of individual's command over resources and as a direct and better measure of economic well-being. Per capita consumption data allows smoothening of income fluctuations, inclusion of non-monetized transactions and the fact that the NSSO consumption data is based on a direct survey (Table 2.2)

The pattern of change in per capita consumption expenditure during 1993-94, 1999-2000 and 2004-05 has shown more stability as compared to per capita income. The coefficient correlation between income and consumption of has declined from 0.59 in 1999-2000 to 0.15 in 2004-05. Surprisingly, fast growing State like Tripura in fact saw decline in consumption whereas high levels of consumption is maintained in State like Nagaland and Mizoram irrespective of the level and growth of per capita income.

NSS surveys have provided consumption expenditures for rural and urban population, different consumption classes and expenditure on major food and non-food items. This allows us to discern the gap between rural and urban consumption expenditure and thus measure the extent of inequality. Consumption expenditure of rural and urban population of NE States can be seen from the table 2.3

Another important aspect of consumption expenditure is the degree of inequality between different income groups. High average consumption expenditure may be because of the expenditure of the top income decile of the population. Such a situation illustrates high degree of inequality thereby adversely affecting economic well-being of the majority. The degree of equality is captured by Gini Coef-

Table 2.2: Monthly per capita Consumption Expenditure of North Eastern States

(Rupees)

States	1993-94	1999-200	2004-05
1. Arunachal Pradesh	343.75	672.31	798.76
2. Assam	280.42	473.42	613.67
3. Manipur	305.59	596.36	643.62
4. Meghalaya	390.00	639.13	762.26
5. Mizoram	472.59	935.53	993.72
6. Nagaland	454.48	1005.99	1094.88
7. Sikkim	321.12	559.97	738.52
8. Tripura	367.43	589.50	578.91
All India	**328.18**	**590.98**	**700.33**

Source: NSS 38th, 50th, 55th & 61st Round on Household Consumption Expenditure.

ficient. Under perfect equality, the Coefficient takes the value 1. (Table 2.4)

Table 2.3: Rural and Urban Monthly per capita Consumption Expenditure in North Eastern States

(Rupees)

States	1993-94		1999-2000		2004-05	
	Rural	Urban	Rural	Urban	Rural	Urban
1. Arunachal Pradesh	316.85	494.11	647.92	765.91	771.53	881.1
2. Assam	258.11	458.60	426.12	814.12	543.18	1057.99
3. Manipur	299.57	319.55	537.79	707.77	614.2	726.38
4. Meghalaya	356.98	530.55	563.64	971.87	655.3	1190.09
5. Mizoram	389.55	549.51	721.83	1056.64	778.35	1200.51
6. Nagaland	441.45	510.02	941.30	1242.39	1010.81	1498.47
7. Sikkim	298.72	518.44	531.68	905.69	688.53	1106.79
8. Tripura	343.93	489.94	528.41	876.59	487.63	1000.54
All India	**281.40**	**458.00**	**486.08**	**854.96**	**558.78**	**1052.36**

Source: NSS 38th, 50th, 55th & 61st Round on Household Consumption Expenditure.

Table 2.4 Gini Coefficient for North Eastern States

States	1993-94		1999-2000		2004-05	
	Rural	Urban	Rural	Urban	Rural	Urban
1. Arunachal Pradesh	0.300	0.275	0.292	0.298	0.272	0.243
2. Assam	0.176	0.285	0.201	0.311	0.197	0.314
3. Manipur	0.149	0.153	0.192	0.216	0.158	0.175
4. Meghalaya	0.271	0.239	0.149	0.205	0.155	0.258
5. Mizoram	0.165	0.174	0.188	0.237	0.194	0.244
6. Nagaland	0.153	0.195	0.155	0.206	0.209	0.233
7. Sikkim	0.207	0.249	0.221	0.256	0.263	0.257
8. Tripura	0.236	0.279	0.189	0.294	0.215	0.338
All India	**0.282**	**0.340**	**0.258**	**0.341**	**0.297**	**0.373**

Source: Planning Commission.

4. COMPOSITION OF CONSUMPTION EXPENDITURE

The composition of consumption expenditure in terms of food and non-food items is an important indicator of economic well-being as the share of food items in total expenditure is expected to be substantially high for poor households or individuals.

Expenditure on food accounted for more than half of the per capita expenditure of rural population of NE States in 2004-05. For urban population, the share is below half for all the States, excepting Arunachal Pradesh. All the States have witnessed decline in the share of food in per capita consumption. The decline between 1993-94 and 2004-05 is maximum for rural population of Manipur and minimum for Tripura. In case of urban population, maximum decline is seen in Meghalaya and minimum in Mizoram.

Table 2.5: The share Food and Non-Food Items in Consumption Expenditure in North eastern States

(Rupees)

States	RURAL				URBAN			
	1993-94		2004-05		1993-94		2004-05	
	Food	Non-Food	Food	Non-Food	Food	Non-Food	Food	Non-Food
1. Arunachal Pradesh	61.63	38.37	50.62	49.38	60.82	39.18	51.34	48.66
2. Assam	72.26	27.74	65.99	34.01	59.68	40.32	49.50	50.50
3. Manipur	67.48	32.52	54.75	45.25	63.82	36.18	49.29	50.71
4. Meghalaya	60.83	39.17	56.10	43.90	56.38	43.62	40.36	59.64
5. Mizoram	61.24	38.76	56.95	43.05	54.14	45.86	46.35	53.65
6. Nagaland	64.99	35.01	54.11	45.89	58.85	41.15	45.44	54.56
7. Sikkim	65.65	34.35	54.16	45.84	55.18	44.82	41.98	58.02
8. Tripura	64.85	35.15	63.19	36.81	56.96	43.04	47.15	52.85
All India	**63.18**	**36.82**	**55.05**	**44.95**	**54.65**	**45.35**	**42.51**	**57.49**

Relative Share of Food and Non-Food in Consumption Expenditure of NE States

Chart I

Arunachal Pradesh

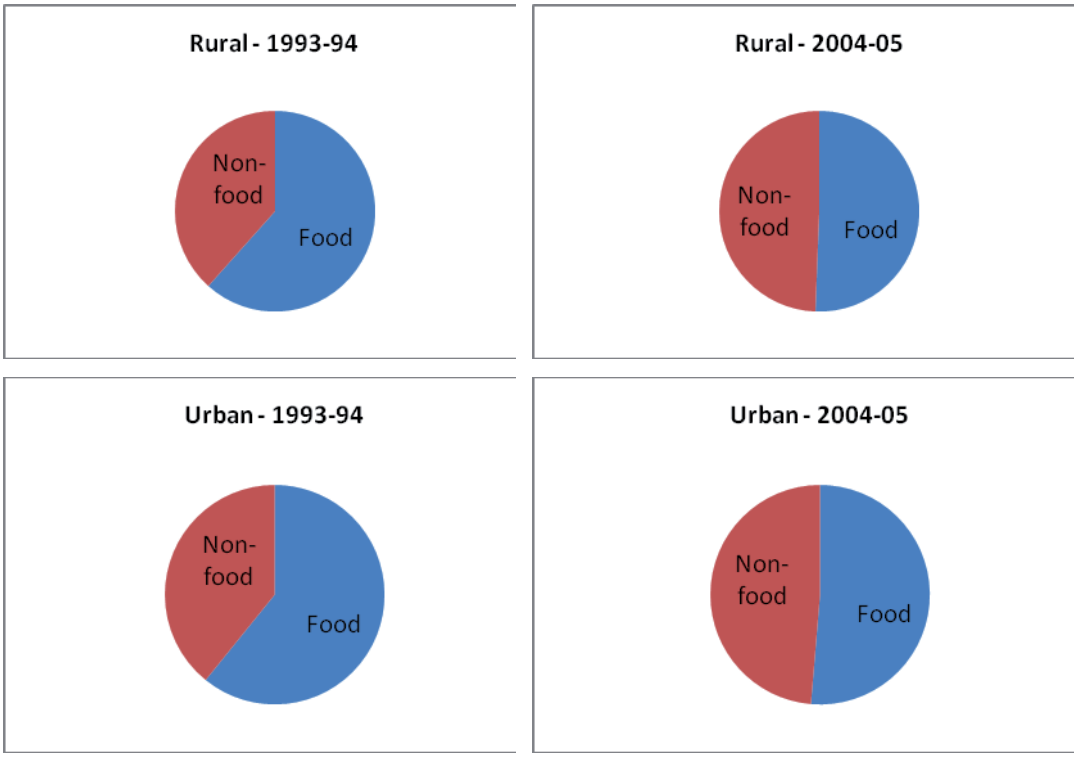
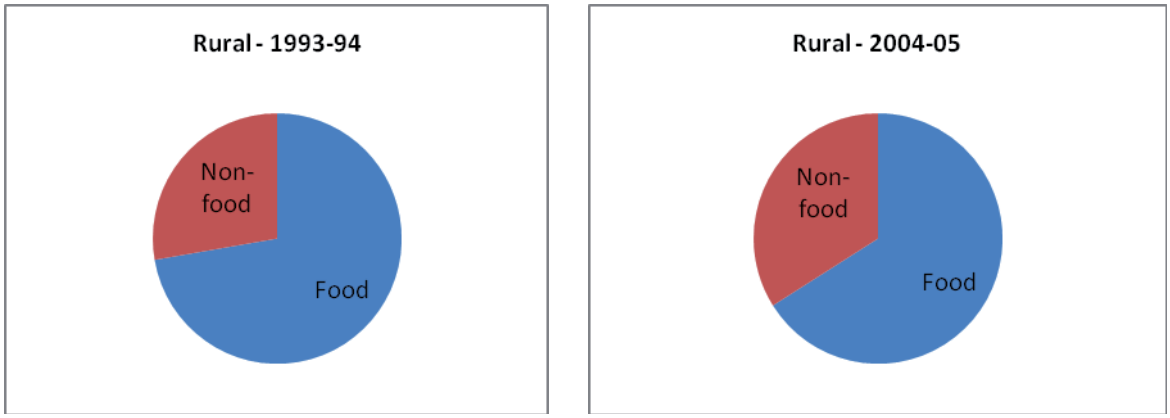


Chart II

Assam



Assam

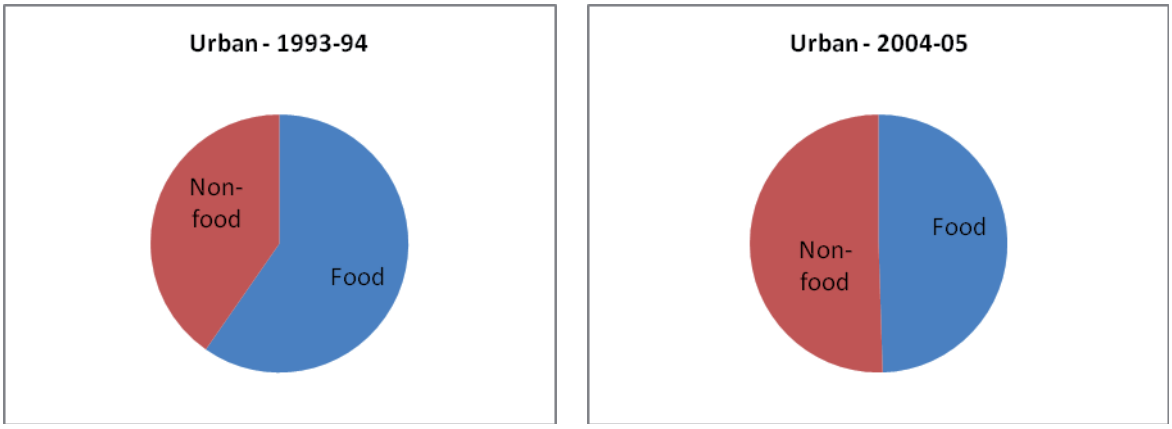


Chart III

Manipur

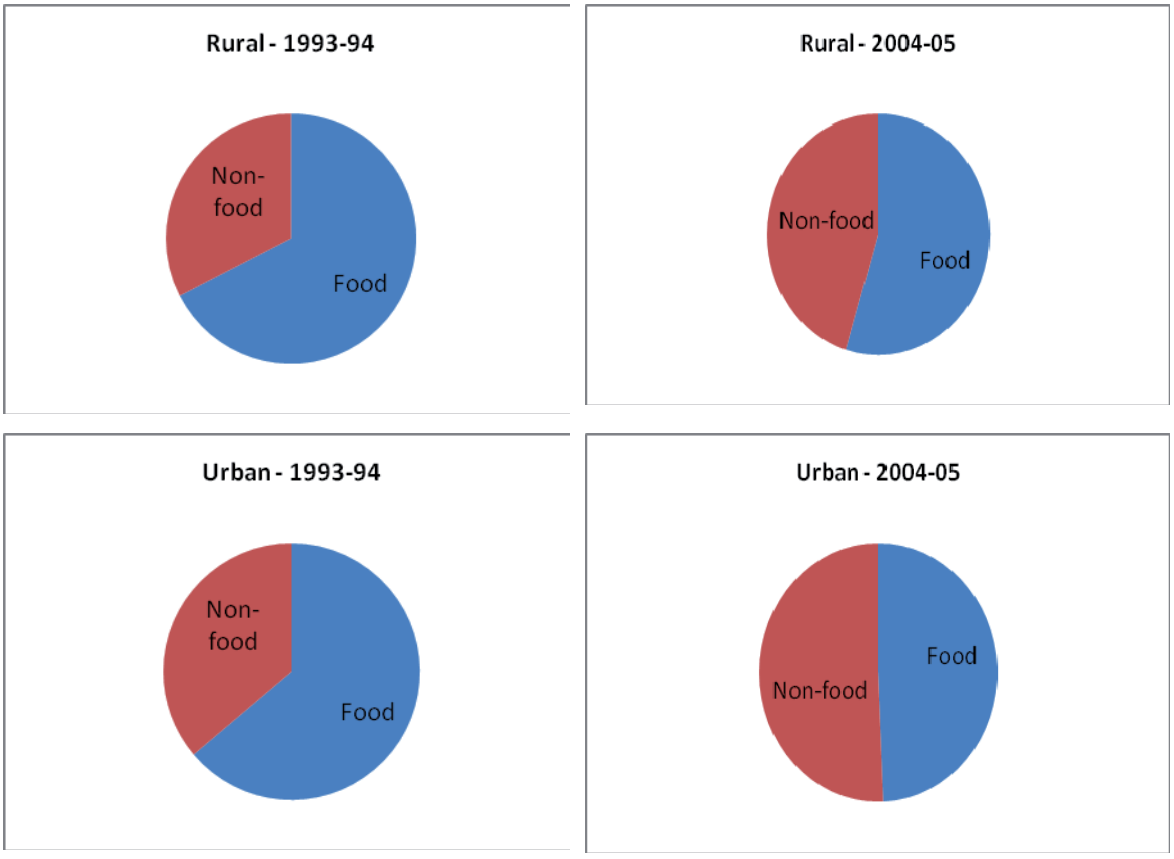


Chart IV

Meghalaya

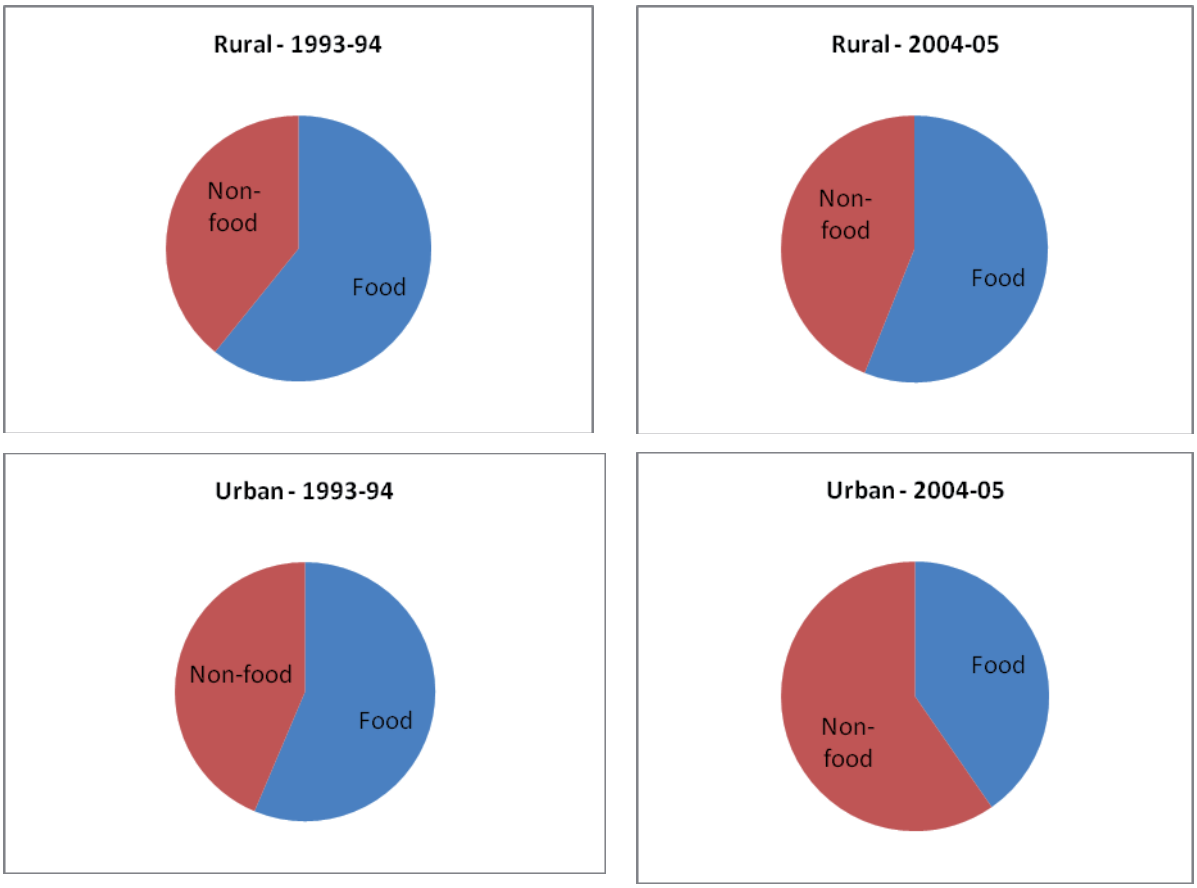
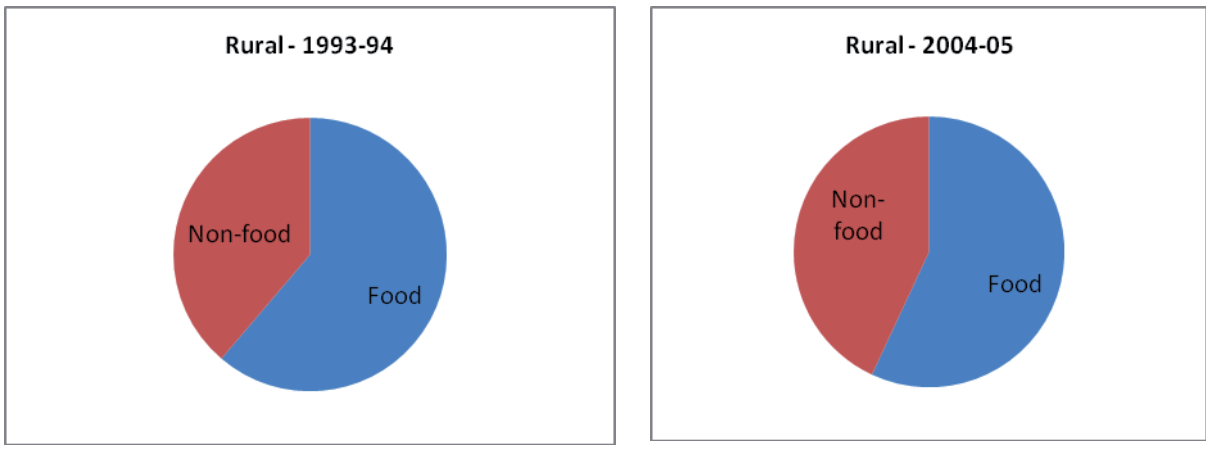


Chart V

Mizoram



Mizoram

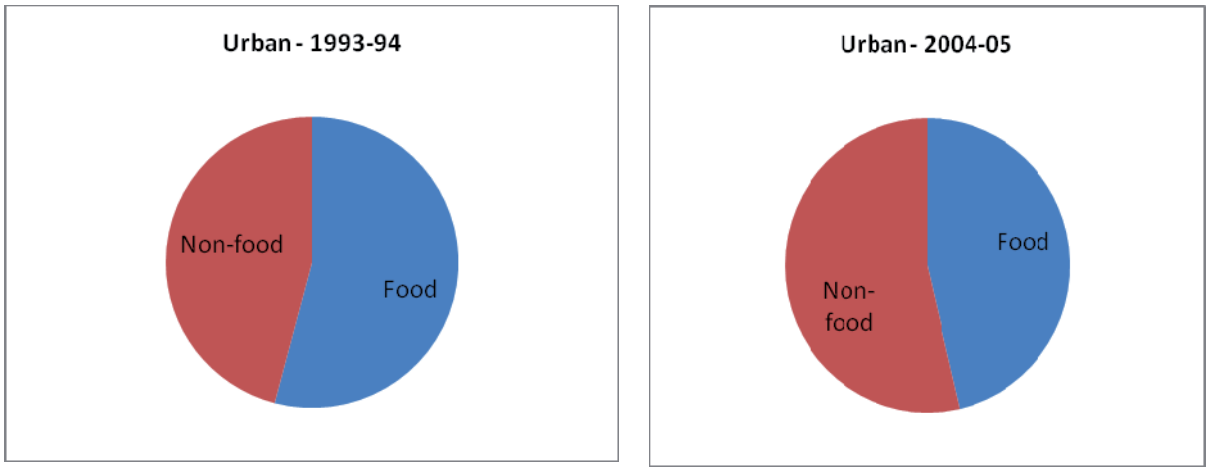


Chart VI

Nagaland

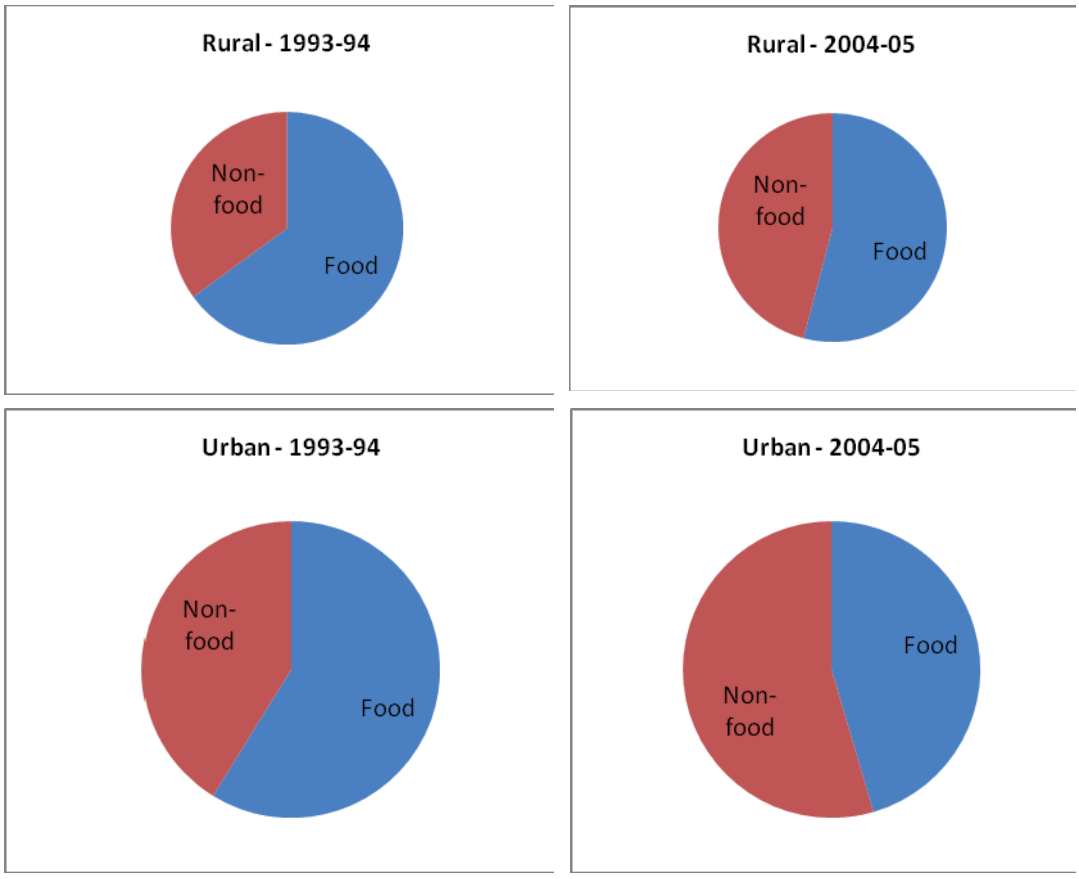
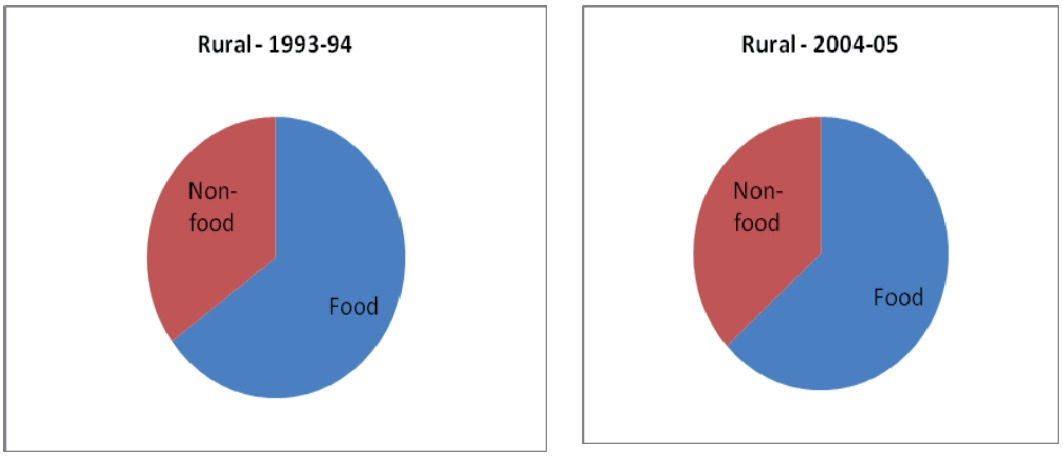


Chart VII

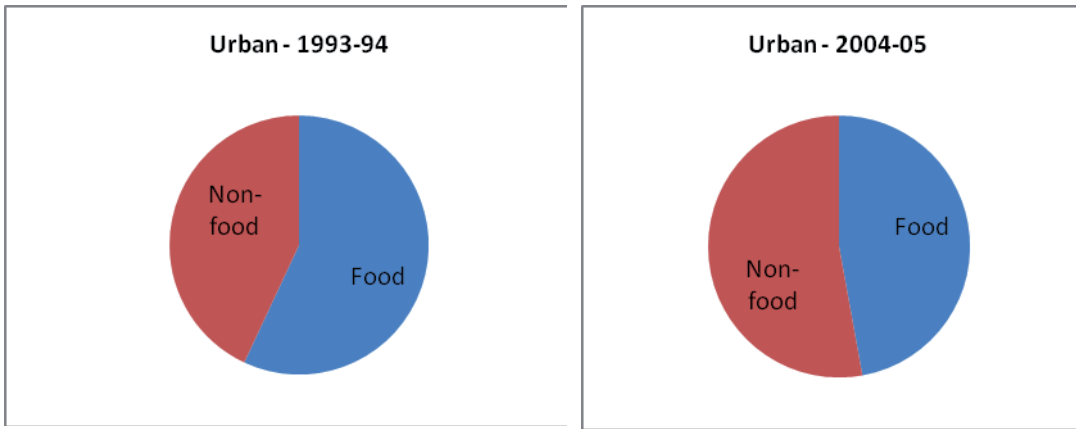
Sikkim

Chart VIII

Tripura



Tripura



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CHAPTER 3
QUALITY OF OPPORTUNITY – EDUCATIONAL ATTAINMENTS

The process of education and attainments thereof, has an impact on all aspects of life. The level and spread of education has not only been an important precondition for sustained economic growth, both in the developed and the developing countries, but it has also played a critical facilitative role in the demographic, social and political transition of these societies. Lower fertility, infant and child mortality rates; better nutritional, hygiene and health status of children, reproductive health and empowerment of women; social mobility and political freedom all have, visible linkages with educational attainments of people.

INDICATORS

I) Literacy Rates

Literacy is a person's first step in learning and knowledge building and, therefore, literacy indicators, arc essential for any measurement of human development.

For the purpose of Census, a person aged 7 and above, who can both read and write with understanding in any language is treated as literate. It is not necessary that to be treated as literate, a person should have received any formal education or acquired any minimum educational standard. The age limit was raised to 7 years of age at the time of 1991 Census, on the advice of experts that the ability to read and write with understanding is not ordinarily achieved until the age of 7 years. The Census of 2001 and 2011 have retained the above criterion. Accordingly, the sub population in age group 0-6 years is excluded from the total population in the calculation of Literacy rate or Effective Literacy rate used interchangably (the crude literacy rate on the other hand takes into calculation the population of the 0 – 6 years age group also)

The formula for calculation of Literacy rate / Effective Literacy rate is:

$$\frac{\text{Number of Literate persons aged 7 and above} \times 100}{\text{Population aged 7 and above}}$$

North East States

The North East States are among the best performers in-terms of literacy rates. All the North East States without exception have shown increase in literacy rates during 2001-2011 **(Table 1&2). At the national level the total literacy rate as per 2011 Census is 74.04.** The State of Mizoram has acheived a total literacy rate of 91.58% and ranks third at the all India level after Kerala and Goa. With the exception of Arunachal Pradesh and Assam, all the remaining six north east states have total literacy rates higher than the national average. **The Census 2011 (provisional) results shows that , there is a great degree of variation in the total literacy rates of North East States ranging from 66.95% (Arunachal Pradesh) to 91.58% (Mizoram). (Incidently Arunachal ranks 34th among 35 Indian States).**

During the decade 2001 to 2011 there has been a narrowing of gaps between rural and urban literacy rates and male and female literacy rates in the case of all North East States **(Table 1 and Table 2).**

However, the increase in literacy rate between 2001- 2011 has decreased over that of the previous decade 1991-2001 (Table – 3).

The Census 2011 results revealed that within a State also there is wide variation in the total literacy rates. For instance, Mokokchung in Nagaland has highest total literacy rates of 92.68% while Mon's total literacy rate is as low as 56.60%, a gap of 36.08 percentage points (Table – 4). This clearly shows that a greater degree of effort in implementation of National Literacy Mission is needed in districts showing low literacy rates within a state. The North East States should take advantage of Central funding under the Total Literacy Campaign (TLC) & Post Literacy Projects (PLP).

ii) Other Educational indicators

Apart from literacy level, the number / percentage of out of school children vis a vis child population in the relevant age group, Enrolment, GER. attendance and dropout rates of the school going children or the girl child; or the proportion of population having higher and technical qualification, etc are also used to capture the level of educational attainment in a society.

North East States - Elementary Education

There is wide disparity among the North East States in terms of progress towards achieving universal elementary education (Class I to VIII, age group 6-14 years) (as can be seen from the comparative table on major elementary school education indicators **(Table 5).** At the national level in 2006-07 the drop out in Classes I to VIII, was 45.90 per 100 children enrolled; **6 out of 8 North Eastern States have a higher drop out rate than the national average;** 3 North East States have larger percentage of "out of school" children and 2 States have a lower Gross Enrolment Ratio (GER). Although SSA was launched in November, 2000 only 3 states in the North East (Assam, Mizoram & Nagaland) could introduce it in 2001-02. The remaining 5 States could start SSA only in 2004-05.

The drop out rate has been analysed for North East States at two points of time – 1993-94 **(Table - 6)** and 2004-05 **(Table - 7).**

Table 7 for 2004-05 shows the higher percentage of total drop out rate, for both girls and boys, at the Elementary level (Classes I to VIII; age group 6-14 years) than that at the Primary level (Classes I to V; age group 6-11 years) in case of all the North East States (with the exception of Nagaland). This is in line with the national trend. At the all India level, the total drop out rate at Primary level of 29% sharply increases to 50.84% at Elementary level. The problem of retention of students especially of girls in Class VI is a serious challenge.

Increasing girls enrolment / retention in schools would require consistent efforts in enrolling 'out of school' girls, in general schools or in separate girls schools; increasing the percentage of female teachers and increasing provision for separate girls toilets.

The North East States present a mixed picture in this direction. At the primary level the no. of female teachers per 100 male teachers varies between 125 (Sikkim) to 26 per 100 in Tripura **(Table 9).** Similarly, the percentage of trained teachers at the primary level varies between

77% (Mizoram) to 20% (Arunachal Pradesh). Schools with no separate provision for girls toilets also shows a wide variation as per the latest survey by Pratham. As against the national figure of 29.3 percent of schools which have no separate provision for girls toilets, the figures for some of the North East States are alarming **(Table 11).** 78.5% of schools in Manipur and 60.4% of schools in Arunachal Pradesh have no separate provision for girls toilets.

The same variation is seen in case of availability of drinking water in schools. As against the national figure of 72.2% of schools having drinking water availability, only **5.1% of schools in Manipur have drinking water available,** while 76.8% of schools in Sikkim have drinking water availability **(Table 11).**

Quality improvement in elementary education:

The 11th Plan aims to focus on a range of coherent integrated and comprehensive strategies to improve basic learning levels in all schools and acquisition of basic skills of literacy and numeracy in early primary grades to lay a strong foundation for higher classes.

The Eleventh Plan aims to address all teacher related issues - of vacancies, absenteeism, achieve 100 percent training of teachers, and revision of Pupil Teacher Ratio (PTR) to 30:1 at the primary level (Class I to V) by the end of the Plan period. The NE States have an advantage in-terms of lower pupil teacher ratios at the primary level in comparison with the national figure of 44 (with the exception of Meghalaya which has a higher PTR of 46 at the primary level). However in-terms of training of teachers the NE States lag behind both at the primary and middle school level (Class VI to VIII)**(Table 9).** Assam has performed marginally better, in terms of trained teachers at the middle school level (Class VI to VIII).

III) Assessment of basic learning abilities (Reading & Arithmetic levels).

Since 2005, Pratham a leading NGO conducts the — Annual Status of Education Surveys (ASER) in rural areas of the country. Its latest report for 2010 (ASER 2010) is based on an analysis of data from households in 522 rural districts of the country.

Over the years the Pratham Survey have emerged as a reliable survey for measuring learning levels, since the Annual School Education statistics of MHRD do not provide data on these aspects. The acknowledgement that the quality of learning is poor and must be improved has slowly gathered momentum since the surveys.

The fact that children drop out of school early or fail to acquire basic literacy & numeracy skills partially reflects poor quality of education. The importance of attainment of basic arithmetic and reading-writing-comprehension -expression competencies at an early age is a goal that needs to be urgently addressed on a mass scale, in order to have a better base for improvement at higher levels.

Learning : Reading and Maths

ASER records basic reading levels as:

> Level 1 is the ability to read a small paragraph with short sentences at standard I level difficulty.
>
> Level 2 is the ability to read a 'story' text with some long sentences with standard II level of difficulty.

The NE States score high in learning levels of reading and arithmetic in Stds I to II. Compared to national figures of 76.6 percent of children in Std I to II who are able to read at least letters and recognize numbers between 1 to 9, all the NE States show higher scores than the national average. **(Table 10)**

In learning levels of Std III - IV Arunachal and Assam have under performed. Only 57.5 and 59.2 percent of students of these two states respectively could read textbook of Std I (Level I), compared to 64 percent at national level. Similarly, as against 54.9 percent of students of Stds III to IV at the national level who could do subtraction of 2 digits, only 46.5 percent of students of Assam in Std III to IV could perform two digit subtraction.

The Pratham survey assessed all children in Std V on simple application based on everyday math problems in the following four categories:

- Money task: Solving money related word problems based on prices given on a menu card.
- Calendar task: Finding dates and days in a calendar.
- Area: Calculating the area of a field.
- Estimation: Estimating the volume.

Overall at the national level, in Std V, 63.7 percent of children were able to do calculations based on prices, about 51 percert of children could use the calendar and only 38.1 percent could do the calculations related to area. **There is a great degree of variation in the learning levels of Std V students of NE States while answering the above four category of questions.** This is seen from **Table 10.**

CONCLUSION

At the national level there is need to institute a policy which clearly outlines the learning outcomes that must be achieved by the end of Std II, Std V, and Std VIII. The focus on improving learning levels would need improvement in classroom processes, child centric activities in classrooms, larger recruitment of better educated younger teachers and cluster level leadership created among teachers rather than relying on school administrative support structures and personnel.

States	2001				2011			
	Persons	Male	Female	Gap	Persons	Male	Female	Gap
1. Arunachal Pradesh	54.34	63.83	43.53	20.30	66.95	73.69	59.57	14.12
2. Assam	63.25	71.28	54.61	16.67	73.18	78.81	67.27	11.54
3. Manipur	69.93	79.54	60.10	19.44	79.85	86.49	73.17	13.32
4. Mizoram	88.80	90.72	86.75	3.97	91.58	93.72	89.40	4.32
5. Meghalaya	62.56	65.43	59.61	5.82	75.48	77.17	73.78	3.39
6. Nagaland	66.59	71.16	61.46	9.70	80.11	83.29	76.69	6.60
7. Sikkim	68.81	76.04	60.40	15.64	82.20	87.29	76.43	10.86
8. Tripura	73.19	81.02	64.91	16.11	87.75	92.18	83.15	9.03
All India	**64.83**	**75.26**	**53.67**	**21.59**	**74.04**	**82.14**	**65.46**	**16.68**

Source: Provisional Population Paper 1 & 2 - Census 2011

Table : 2 Literacy Rates 2001, 2011 – by residence, (Rural & Urban)

States	2001				2011			
	Total	Urban	Rural	Gap	Total	Urban	Rural	Gap
1. Arunachal Pradesh	54.34	78.26	47.83	30.43	66.95	84.57	61.59	22.98
2. Assam	63.25	85.34	59.73	25.61	73.18	88.88	70.44	18.44
3. Manipur	69.93	79.28	66.74	12.54	79.85	85.98	77.15	8.83
4. Mizoram	88.80	96.13	81.27	14.86	91.58	98.10	84.31	13.79
5. Mcghalaya	62.56	86.30	56.29	30.01	75.48	91.33	71.15	20.18
6. Nagaland	66.59	84.74	62.79	21.95	80.11	90.21	75.86	14.35
7. Sikkim	68.81	83.91	66.82	17.09	82.20	89.26	79.82	9.44
8. Tripura	73.19	89.21	69.72	19.49	87.75	93.61	85.58	8.03
All India	**64.83**	**79.92**	**58.74**	**21.18**	**74.04**	**84.98**	**68.91**	**16.07**

Source: Provisional Population Paper 1 & 2 - Census 2011

Table: 3 Total Literacy Rates --- Rate of Increase Literacy Rate

States	1991	2001	2011	Increase (1991 to 2001)	Increase (2001 to 2011)
1. Arunachal Pradesh	41.59	54.34	66.95	12.75	12.61
2. Assam	52.39	63.25	73.18	10.36	9.93
3. Manipur	59.89	69.93	79.85	10.64	9.92
4. Mcghalaya	49.10	62.56	75.48	13.46	12.92
5. Mizoram	82.27	88.80	91.58	6.53	2.78
6. Nagaland	61.65	66.59	80.11	4.94	13.52
7. Sikkim	56.94	68.81	82.20	11.87	13.39
8. Tripura	60.44	73.19	87.75	12.75	14.56
All India	**52.21**	**64.83**	**74.04**	**12.63**	**9.21**

Note: The All India figures for 1991 Census exclude Jammu & Kashmir

Sources: (i) Provisional Population Paper 1 & 2 - Census 2011
(ii) National Human Development Report 2001 – Planning Commission

Table 4: Districts with highest and lowest total literacy rates – 2011

States	Total literacy rate	Name of district with highest total literacy rate	Name of district with lowest total literacy rate	Gap
1. Arunachal Pradesh	66.95	Papumpare (82.14)	Kurung Kumey (50.67)	31.47
2. Assam	73.18	Kamrup Metro (88.66)	Dhubri (59.36)	29.30
3. Manipur	79.85	Imphal West (86.70)	Tamenlong (70.40)	16.30
4. Mcghalaya	75.48	East Khasi Hills (84.70)	Jaintia Hills (63.26)	21.44
5. Mizoram	91.58	Serchhip (98.76)	Lawngtalai (66.41)	32.35
6. Nagaland	80.11	Mokokchung (92.68)	Mon (56.60)	36.08
7. Sikkim	82.20	East Sikkim (84.67)	North Sikkim (77.39)	7.28
8. Tripura	87.75	West Tripura (88.91)	South Tripura (85.41)	3.50

Source: Provisional Population Totals – Census 2011

Table 5: North East States - Elementary School Education Indicators (Classes 1 to VIII, age group (6-14) – 2006-07

States	Number of Out of School Children of 6 to 14 Age group	Percentage (%) of Out of School Children of 6 to 14 Age group	Enrolment (Classes I to VIII)	GER (Classes 1 to VIII)	Drop out (Classes 1 to VIII)	PTR Pupil Teacher Ratio at Middle / Senior Basic School	Percentage of teacher vacancies (only Government schools) against normative requirement of PTR more than 40:1, <2 teachers at primary <1 teacher per section at upper primary	Per Capita Budgeted Expenditure (Revenue account on Education in 2006-07) in Rupees *
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1. Arunachal Pradesh	21267	10.95	267111	118.58	54.04	27	16.74	1278.97
2. Assam	235699	4.56	4572519	85.82	73.56	21	12.58	1980.88
3. Manipur	11844	3.05	516600	139.97	41.22	21	4.57	1662.11
4. Meghalaya	9493	2.29	743437	152.72	60.41	15	6.30	1451.36
5. Mizoram	8640	5.43	205309	130.23	62.56	08	1.49	3087.22
6. Nagaland	9116	2.56	316986	79.08	38.60	16	0.90	1595.75
7. Sikkim	672	0.69	116118	114.40	65.85	17	0.36	3702.13
8. Tripura	8845	1.55	698021	119.92	50.52	19	2.07	1521.63
All India	**8043889**	**4.22**	**188196018**	**97.08**	**45.90**	**34**	**9.71**	**1241**

NB: Data of Out of School children and Percentage of Teacher Vacancies taken from MHRD's website - Report for DMU / PMO in case of SSA (Report of quarter ending 30th September 2009. - The source of Out of School Children is All India Sample Survey 2009.
Enrolment, GER. Dropout, PTR, Data on Educational Expenditure taken from latest School Education Statistics 2006-07 (published in 2009).
* The Per Capita Budgeted expenditure during 2006-07 was highest in Sikkim Rs. 3702.13 and lowest in Bihar Rs. 592.42

Table 6: DROP OUT RATES FOR THE YEAR 1993-94

States	Classes I-VIII (Age group 6 to 14 years)		
	BOYS	GIRLS	TOTAL
1. Arunachal Pradesh	69.62	67.45	68.72
2. Assam	63.81	71.80	67.55
3. Manipur	72.41	72.26	72.34
4. Mcghalaya	58.14	57.11	57.65
5. Mizoram	54.05	50.60	52.44
6. Nagaland	36.71	39.58	38.13
7. Sikkim	78.83	77.93	78.43
8. Tripura	66.28	70.92	68.39
All India	**49.95**	**56.78**	**52.80**

Source: Annual Report for the year 1994-95 of Department of Education, Ministry of HRD

Table 7: DROP OUT RATES FOR THE YEAR 2004-05

States	Classes l-V (Primary) (Age group 6 to 11 years)			Classes I-VIII (Elementary) (Age group 6 to 14 years)		
	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL
1. Arunachal Pradesh	45.86	48.01	46.85	63.23	61.90	62.63
2. Assam	51.58	48.34	50.07	72.41	74.60	73.38
3. Manipur	29.71	32.74	31.IS	34.47	30.91	32.80
4. Mcghalaya	51.77	48.15	49.97	65.99	62.43	64.21
5. Mizoram	50.84	48.71	49.84	68.99	64.34	66.84
6. Nagaland	41.79	43.66	42.69	41.09	43.93	42.49
7. Sikkim	52.01	46.80	49.44	72.48	70.02	71.22
8. Tripura	43.76	42.58	43.20	62.05	66.42	64.15
All India	**31.81**	**25.42**	**29.00**	**50.49**	**51.28**	**50.84**

Source: Selected Educational Statistics 2004-05, Ministry of Human Resource Development

Table 8: Mean Years of Education, 1993-94 & 2004-05

States	1993-94			2004-05		
	Male	Female	Total	Male	Female	Total
1. Arunachal Pradesh	2.9	1.5	2.3	4.9	3.3	4.2
2. Assam	4.9	3.1	4.1	5.4	3.7	4.6
3. Manipur	7.0	4.3	5.6	7.4	5.2	6.3
4. Meghalaya	3.9	2.8	3.4	4.9	4.3	4.6
5. Mizoram	6.4	5.2	5.8	7.3	6.3	6.8
6. Nagaland	7.4	5.1	6.4	7.9	6.3	7.1
7. Sikkim	4.8	3.1	4.0	4.9	3.9	4.4
8. Tripura	5.0	3.3	4.2	5.3	3.8	4.6
All India	**4.6**	**2.5**	**3.6**	**5.7**	**3.6**	**4.7**

Source: "Gendering Human Development Indices" Ministry of Women and Child Development (2009) based on NSSO 50th Round (1993-94); NSSO 61st Round (2004-05); calculated values

NB: Mean years of education has been worked out from NSSO data on distribution of persons of 15+ years by general education. Different levels of education are assigned different values (years) eg. illiterate – 0; Literate below primary – 1; Middle – 4….. Graduate – 15 etc. to work out the mean years of education.

Table : 9 Number of Teachers, Percentage of Trained Teachers, No. of Female teacher per 100 Male and Pupil Teacher Ratio.

States	Primary School (Class 1-V)				Middle School / Upper Primary (Class VI- VIII)			
	No. of Teachers	Percentage of trained teachers	Pupil Teacher Ratio (PTR)	No of female teachers per 100 male	No. of Teachers	Percentage of trained teachers	Pupil Teacher Ratio (PTR)	No. of female teachers per 100 male
1. Arunachal Pradesh	4069	20	28	50	4165	27	27	44
2. Assam	85691	64	39	53	73914	90	21	35
3. Manipur	7767	35	33	63	8597	32	21	70
4. Mcghalaya	14745	45	46	88	9407	36	15	85
5. Mizoram	8099	77	16	108	7271	59	8	50
6. Nagaland	7948	34	20	59	6263	17	16	61
7. Sikkim	7908	63	14	125	1820	42	17	65
8. Tripura	7805	74	27	26	8319	48	90	26
All India	**2323286**	**86**	**44**	**66**	**1717435**	**87**	**34**	**65**

Source: Selected school education statistics 2006-07 MHRD

Table 10: Learning Levels — Reading and Arithmetic

PERFORMANCE OF NE STATES									
		Std I-II : Learning levels		Std III-V: Learning levels		Std V : Everyday Maths* (Assessment of std V Students)			
Sl No	States Name	% Children (Std I-II) who CAN READ letters or more	% Chlldren (Std 1- II) who CAN RECOGN1ZE NUMBERS 1 to 9 or more	% Children (Std lll-V) who CAN READ Level I (Std 1 Text) or more	% Children (Std lll-V) who CAN DO SUBTRACTION or more	% Children answering both questions correctly	% Children answering both questions correctly	%Children answering correctly	% Children answering correctly
						Menu	Calendar	Area	Estimation
1.	Arunachal Pradesh	92.1	93.7	**57.5**	61.7	53.0	45.7	28.1	39.0
2.	Assam	75.5	77.1	**59.2**	**46.5**	66.6	47.9	27.6	46.2
3.	Manipur	95.4	95.7	72.4	69.1	60.2	61.3	33.8	61.8
4.	Mizoram	95.2	93.7	89.2	84.3	84.1	65.5	34.4	44.7
5.	Meghalaya	91.3	89.0	76.5	63.0	70.2	57.6	41.7	51.1
6.	Nagaland	97.9	98.1	69.4	65.3	63.6	43.0	14.0	47.6
7.	Sikkim	96.6	97.5	76.4	72.8	71.3	53.6	28.4	40.4
8.	Tripura	95.3	95.4	70.0	65.3	46.4	39.8	21.1	45.1
	All India[$]	**76.6**	**76.6**	**64.0**	**54.9**	**63.7**	**50.9**	**38.1**	**46.5**

Source: Pratham Report — ASER 2010

[$] All India figures exclude data for Madhya Pradesh and J&K

Note * All children in Std V were assessed on simple application based on everyday math problems in four categories :

1. Money Task : Solving money relating word problems based on prices given on a menu card.
2. Calendar task: Finding dates and days in a calendar.
3. Area: Calculating the area of a field.
4. Estimation: Estimating the volume of a given figure.

Table 11: School Facilities in NE States

Sl. No.	States	Building			Drinking Water			Toilet			Girls Toilet				Teaching Learning		Library			MDM	
		Office / Store / Office Cum-Store	Play-ground	Bound-ary wall	No facility	Facility but no Drinking water available	Drinking water available	No Toilet Facility	Facility but Toilet not useable	Toilet Useable	%Schools with no separate provision for girls toilets	Of Schools with separate girls toilets, % schools where:			Teaching Learning material in Std II	Teaching learning material in Std IV	No Library	Library but no Books being used by Children on day of survey	Library books being used	Kitchen sheds for cooking	Mid day meal served on day of survey
												Toilet locked	Toilet not useable	Toilet useable							
1.	Arunachal Pradesh	77	59.2	25.1	36.9	9.9	53.2	20.8	47.3	31.8	**60.4**	11.7	12.2	15.8	39.4	34.4	87	6.7	6.3	64	47.2
2.	Assam	57.3	61.5	19.3	23.2	16.0	60.9	19.1	46.0	34.9	52.2	18.5	15.3	14.0	71.4	67.1	79.2	10.3	10.5	80	66.6
3.	Manipur	68.1	72.3	11.1	84.6	10.3	**5.1**	21.4	36.8	41.9	**78.5**	5.6	6.5	9.3	48.7	38.4	90.8	3.4	5.9	59.2	47.8
4.	Meghalaya	33.6	45.5	13.8	70.6	5.5	23.9	34.9	37.7	27.4	64.8	9.1	10.2	15.9	40.0	26.8	78.0	6.4	15.6	59.4	50.9
5.	Mizoram	80.1	40.7	35.5	47.3	4.1	48.5	7.1	36.7	56.2	43.4	15.1	10.7	30.8	40.2	36.0	93.6	4.7	1.7	96.5	94.4
6.	Nagaland	83.6	63.8	43.3	56.9	6.0	37.0	13.8	30.0	56.2	47.8	9.4	11.7	31.1	48.3	43.5	86.7	4.1	9.2	81.9	30.7
7.	Sikkim	92.7	79.7	14.5	11.6	11.6	76.8	1.4	30.4	68.1	17.2	28.1	12.5	42.2	64.7	70.7	55.9	17.6	26.5	95.7	98.6
8.	Tripura	88.8	89.7	19.0	32.6	27.4	40.0	8.6	44.1	47.3	48.5	18.2	3.0	30.3	52.7	32.3	64.6	15.6	19.8	88.4	75.3
	All India	**74.5**	**62.1**	**52.2**	**17.4**	**10.5**	**72.2**	**10.1**	**38.8**	**51.1**	**29.3**	**19.9**	**14.0**	**36.8**	**80.4**	**75.9**	**36.9**	**24.4**	**38.7**	**81.3**	**83.4**

Source: Pratham Survey ASER 2010

Note: Based on extracts from the Schedule of The Right of Children to Free and Compulsory Education Act, 2009. **Norms and Standards for School Facilities include:** All Weather Buildings with: At least one classroom for every teacher; Office cum store cum headteacher's room; Separate toilets for girls and boys; Safe and adequate drinking water facility; A kitchen where mid day meal is cooked; Playground; Arrangement for securing the school building by boundary wall / fencing; TLM to be provided for each class as required; a library in each school providing books on all subjects including storybooks

CHAPTER 4
QUALITY OF LIFE – LONGEVITY AND HEALTH

The strong link between poverty and ill health needs to be recognized. The onset of a long and expensive illness can drive the non-poor into poverty. Ill health creates immense stress even among those who are financially secure. The importance of public provisioning of quality health care to enable access to affordable and reliable health services needs no reiteration.

The present chapter presents the health profile of North East States with respect to Vital Statistics which include indicators such as birth rate, death rate, natural growth rate, life expectancy, and fertility rate. It also outlines the access to preventive and curative health in the North East States and helps in identifying areas which need policy and programme intervention.

SOURCES OF DATA

The analysis is at two points of time 1994 and 2004. However wherever available the information for the latest year has been added in the tables. The source of data is largely the i) Sample Registration System of the Registrar General of India. ii) Census data including the latest Provisional Population Tables of 2011. iii) The National Family Health Survey [NFHS – III (2005-06)] of the Ministry of Health and Family Welfare.

The Health Sector analysis can be broadly grouped under following sections: --

I. **Demographic Trends (Vital Statistics): Tables 1, 2, 4 and 11.** The indicators include Birth Rate, Death Rate, (also called Crude Birth Rate and Crude Death Rate), Life Expectancy, Total Fertility Rate and Sex Ratio.

II. ***Mortality Indicators:*** Include Infant Mortality Rate and Maternal Mortality Ratio (Tables 5 and 7). [Analysis linked to Table 3 (Mean age at Marriage) Table 6 (Percentage of Immunisation of children), Table 8 (Percentage of Deliveries attended by trained personnel), Table 9 (Ante – Natal Care)].

III. **Nutritional Status of Women and Children** has direct linkages to poverty / food deprivation at household level / Nutritional Deficiencies (Anaemia) / being under weight and prone to infections and diseases (Table 10).

IV. **Morbidity / Disease Patterns (Tables 13 A and 13 B):** The analysis is for diseases which have high prevalence in the North East States – Malaria, HIV, Acute Diarrhoeal, and Acute Respiratory Infections.

V. **Health Infrastructure and Health Manpower (Tables 14 and 15 A and 15 B):** The analysis of shortages has been done in terms of prescribed norms of the MoHFW. {(Required (R), In position (P), Shortfall (R-P)}.

SECTION I

I. Demographic Trends (Vital Statistics): (Tables 1 and 2), At the National level, India is in the early stages of demographic transition (prior to population stabilization). Historically high birth rates and death rates in the early stages of development yield ultimately to low levels of birth and deaths, thereby stabilizing population growth. The transition is not simultaneous. In the early stages, the **rapid decline** in death rates is accompanied by **gradual decline** in birth rates and fertility rates. As a result in this stage there is rapid population growth. The demographic transition towards stabilisation of population, depends on economic growth / economic prosperity / access to health services / access to safe drinking water and sanitation / spread of education / social factors such as work participation of women, age of marriage, acceptance of family planning, family structures etc. **Only when there is a rapid decline in fertility rates will the population stabilize.**

- Between 1994 – 2004 at the national level, while the birth rates, death rates and Total Fertility rate have declined, **the rate of decline of death rates (24%) was higher than the rate of decline of birth rate (19 %)** (Table 1).

- **The rates of decline in the three indicators in recent years (2004-2009) has been at a quicker pace than the previous decade (1994 - 2004) which indicates the process towards stabilization (Table 1).**

- **The population stabilisation will come only when the total fertility rate of women declines rapidly. The TFR is defined as the number of live births (not pregnancies) a women would expect to deliver if she were to live through her reproductive years (age 15 to 49 years) and to bear children at any age between 15 to 49 years in accordance to the age specific fertility rate.**

- The replacement level of population, the world over, is when the TFR reaches 2.1. The replacement level is when a woman produces 2.1 children, to replace parents and a third, to make up for differing sex ratio at birth (on an average 105 boys are born for 100 girls)

- The TFR for the country remained stationery at 2.6 during 2008 to 2009. However, some of the North East States have already achieved replacement level TFR viz 2.1 (estimates for years 2005-07). These States are Manipur, Tripura, Sikkim, Nagaland and Mizoram (Table 2).

- The TFR of Assam (2.7) and Arunachal Pradesh (2.7) is close to the national average while Meghalaya (3.1) has to work harder to reduce its TFR to national level and then to 2.1.

LIFE EXPECTANCY

Since developing countries have high infant mortality rates (number of deaths per 1000 live births in the first year of a childs life) the commonly used life expectancy at birth is discarded. The high IMR will influence life expectancy at birth. Hence life expectancy at age 1 is used. The SRS data is only available for Assam. As seen from Table 4 the life expectancy at age 1 for Assam (2004) is much lower than the national average both for males and females. Assam needs to increase access of health services to raise its life expectancy to the national level.

SEX RATIO

As per the recently published provisional population results of the 2011 Census, the **overall sex ratio** (total population at all ages) at the national level is 940 females for 1000 males. **Three North East States namely, Arunachal Pradesh, Nagaland, and Sikkim have lower overall sex ratio than the national level as per 2011 Census (Table 11).**

The child sex ratio in age group 0 to 6 years is of special interest in the light of falling number of girl child at the all India level. As per 2011 Census, the NE States have a favorable child sex ratio compared to national figure of 914 girls to 1000 boys in the above age group **(Table 11).**

However, there has been a decline in the child sex ratio (0-6 years) in case of seven North East States (with the exception of Mizoram) **from the previous Census of 2001.** This is noteworthy specially when there are almost nil cases of foeticide and infanticide (Table 12). The implementation of the PC – PNDT act as also the immunization programs for children in the 0 to 6 years age group need to be improved in the above States.

SECTION II

Mortality Indicators

i) **The Infant Mortality Rate (IMR) (Table 5)** is defined as number of deaths per 1000 live births in the first year of a child's life. As per the SRS data of 2009 the IMR at the national level is 50. With the exception of Assam and Meghalaya the IMR of the rest of NE States is much lower than the national figure of 50. The higher IMR in Assam and Meghalaya can be correlated to the lower percentage of fully immunised children and the higher percentage of children receiving no immunization (compared to national averages) (Table 6).

ii) **Maternal Mortality Ratio** is defined as maternal deaths per lakh (100000) live births. Maternal deaths occur due to complications in pregnancy and during child birth. Levels of maternal mortality vary greatly across regions due to variations in access to emergency obstetric care. The SRS data is available only for Assam which has a high MMR of 480 in 2004-06 as compared to national figure of 254 (Table 7). This is corroborated by a much lower percentage of institutional births (Table 8) and weak Ante Natal care (Table 9) in the State of Assam.

The Government of Assam should leverage assistance under the Janini Suraksha Yojna (JSY) a 100 percent centrally sponsored initiative under the flexi pool mechanism of NRHM, having a dual objective of reducing maternal and infant mortality by promoting institutional deliveries. However, since the country does not have the institutional capacity to receive the high number of women giving birth each year (26 million women), the state governments including Assam should also invest in training of home based skilled birth attendants and provision of nutritional supplements

SECTION III

The nutritional status of women and children has a direct linkage to poverty / food deprivation at the household level. The nutritional deficiency in women and children lead to their being under weight. Under weight children can also be stunted. Further, they are prone to in-

fections and diseases. **Tables 10** from the National Family Health Survey (2005-06) spells out the details. **As against 42.5 % children, under 5 years, at the national level being under weight, 48.8% children of the same age group are under weight in Meghalaya.** The remaining NE States fare much better than the national average.

At the national level out of 100 children in the age group 6 to 59 months 69.5 children are anaemic. The North East States fare better with lower percentages of anaemic children.

Some of the NE States fare poorly in case of anaemia among women in the age group 15 to 49 years, despite the region having abundant fruit and vegetable production. As against 55.3% of women being anaemic in the above age group at the national level, the percentages for Assam, Tripura, and Sikkim are 69.5%, 65.1% and 60% respectively. This calls for greater efforts in Information Education & Communication (IEC) in local languages of Assamese, Nagamese, Khasi etc. and also more targeted intervention under the National Anaemia Prophylaxis Programme of Ministry of Women & Child Development.

SECTION IV

Morbidity / Disease Patterns (Tables 13 A and 13 B): Table 13A based on the National Health Profile 2010 of the Ministry of Health and Family Welfare shows the prevalence level and deaths occurring in the NE States under the three diseases of Malaria, Acute Diarrhoeal, and Acute Respiratory Infections.

The high number of death cases as a percentage of all India, in case of all the three diseases, in the state of Assam is a cause of concern and calls for better implementation of public health programmes and provision of safe drinking water and sanitation facilities.

Poor connectivity of roads & scattered habitations is a major reason for lack of access to public health facilities. While district level data on incidence of diseases is not available, the North East States, especially Assam needs to focus on the flood prone districts & other marginal areas of the State. The population living in 2300 remote, floating villages on the river islands (saporis) of Brahmaputra in Upper Assam face the twin challenges of disease and deprivation. The 11th plan has stressed upon the need to upscale the innovative intervention of "Akha- The Ship of Hope" under NRHM. There has been increase in the number of ships offering mobile health care during the Plan period. However **the health outreach should be fully functional in terms of manpower, equipment and medicines.**

Table 13B from the same publication shows the observed HIV prevalence levels. HIV screening is conducted in Antenatal Clinics (ANC) and at Sexually Transmitted Disease clinics (STD) Clinics. There has been sharp reduction in the HIV cases which have been screened in STD Clinics in Manipur. The position for Mizoram is cause of concern as the HIV prevalence levels in case of those screened in STD clinics has increased from year 2002 to 2007 (however, the data shows that there is a marginal reduction in 2008 from 2007).

SECTION V

Health Infrastructure and Health Manpower: (Table 14, 15 A and 15 B) the analysis has been w.r.t. the prescribed norms of the Health & Family Welfare Ministry for various categories of manpower as also for infrastructure.

Health Infrastructure: As per national norms, the following infrastructure is to be put in place. The Sub-centres are fully funded by GOI since 2002 while PHCs and CHCs are established and maintained by State Governments.

Indicator	National Norm	
Rural Population (2001)	**General Area**	**Tribal/Area**
1 Sub-Centre for every	5000 population	3000 population
1 Primary Health Centre (PHC) for every	30000 population	20000 population
1 Community Health Centre (CHC) for every	120000 population	80000 population

It is seen from the **Table 14** that as against the required number of PHCs and CHCs there is shortfall in Tripura (PHCs) and in case of Assam, Tripura and Sikkim the shortfall is in terms of (CHCs). **For the North Eastern States having scattered and low density population the institutions need to be set up on the basis of habitation and not on population norms.**

Tables 15A and 15B show that the gap between requirement and availability of human resources, at various levels of health care (sub centers, PHCs, CHCs) is wide in case of some of the North Eastern States.

In the case of Assam, there is acute shortage in category of male health workers at sub-centres, doctors at PHCs and specialist at CHCs. Similar position is found in case of Assam for pharmacists and lab-technicians at PHCs / CHCs.

For **Arunachal Pradesh,** the shortage can be seen at the sub-centre and PHC level in case of female health workers / ANMs,. There is also shortage of male health workers at sub-centres. **There is not a single female health assistant / lady health visitor posted at the PHCs in the State.** Being a far flung thinly populated state the posting of paramedical staff in the sub-centres / PHCs is of crucial importance.

The North East States must avail of the central assistance under NRHM for admissible components / staff as per prescribed norms so as to fill in the gaps.

Table 1: Vital Statistics – Birth Rate, Death Rate, Natural Growth Rate

States	Birth Rate			Death Rate			Natural Growth Rate		
	1994	2004	2009	1994	2004	2009	1994	2004	2009
1. Arunachal Pradesh	28.5	21.2	21.1	9.9	4.7	6.1	18.6	16.5	15.0
2. Assam	30.8	25.1	**23.6**	9.2	8.8	**8.4**	21.6	16.3	**15.2**
3. Manipur	21.7	13.9	15.4	6.7	4.3	4.7	15.0	9.6	10.7
4. Mizoram	-	19.1	17.6	-	5.2	4.5	-	13.9	13.0
5. Meghalaya	29.5	25.2	24.4	7.1	7.3	8.1	22.4	17.9	16.3
6. Nagaland	20.1	13.9	17.2	4.3	3.7	3.6	15.8	10.2	13.6
7. Sikkim	24.6	19.5	18.1	2.9	4.9	5.7	21.7	14.6	12.3
8. Tripura	21.9	15.0	14.8	5.3	5.5	5.1	16.6	9.5	9.7
All India	**28.7**	**24.1**	**22.5**	**9.3**	**7.5**	**7.3**	**19.4**	**16.6**	**15.2**

Source: 1. Compendium of India's Fertility & Mortality Indicators 1971 to 2007 Based on Sample Registration System (SRS).

2. SRS Bulletin, January, 2011

Table 2: Total Fertility Rate

States	1994	2004	2007
1. Arunachal Pradesh	**3.4**	**2.5**	**2.7**
2. Assam	**3.8**	**2.9**	**2.7**
3. Manipur	**2.4**	**1.7**	**1.6**
4. Mizoram	**-**	**2.0**	**2.0**
5. Meghalaya	**3.8**	**3.2**	**3.1**
6. Nagaland	**2.1**	**1.7**	**2.0**
7. Sikkim	**3.4**	**2.2**	**2.0**
8. Tripura	**3.7**	**1.6**	**1.7**
All India*	**3.5**	**2.9**	**2.6***

Source: Compendium of India's Fertility & Mortality Indicators 1971 to 2007

Figures for smaller states (except Assam) refer to 2005-07 (3 year moving average)

*** The TFR estimates for India pertain to 2009 – (*Source: Paper of RGI dated 7th July, 2011 on Maternal & Child Mortality and Total Fertility Rates)***

Table 3: Mean Age At Marriage

States	Total		Rural		Urban	
	1991	2001	1991	2001	1991	2001
1. Arunachal Pradesh	18.5	19.6	18.5	19.6	18.5	19.6
2. Assam	18.2	19.7	18.2	19.6	18.8	20.6
3. Manipur	19.4	21.5	19.4	21.4	19.5	21.9
4. Mizoram	20.3	21.8	20.0	21.3	20.7	22.3
5. Meghalaya	19.3	20.5	19.2	20.4	19.8	21.2
6. Nagaland	20.1	21.6	20.3	21.7	19.5	21.0
7. Sikkim	19.2	20.2	19.2	20.2	19.3	20.5
8. Tripura	17.8	19.3	17.7	19.1	18.5	20.2
All India	**17.7**	**18.3**	**17.4**	**17.9**	**18.5**	**19.4**

Source: Census of India 1991 and 2001

Table 4: Life Expectancy at age 1 by Sex

States	1994			2004		
	Total	Males	Females	Total	Males	Females
1. Arunachal Pradesh	-	-	-	-	-	-
2. Assam	60.4	60.4	60.6	62.8	62.5	63.0
3. Manipur	-	-	-	-	-	-
4. Mizoram	-	-	-	-	-	-
5. Meghalaya	-	-	-	-	-	-
6. Nagaland	-	-	-	-	-	-
7. Sikkim	-	-	-	-	-	-
8. Tripura	-	-	-	-	-	-
All India	**64.5**	**63.9**	**65.1**	**66.6**	**65.6**	**67.4**

Source: 1. SRS, based Abridged Life Tables, 1990-94 and 1991-95.
2. SRS, based Abridged Life Tables, 2001-05.

Table 5: Infant Mortality Rate

States	1994			2004			2009		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1. Arunachal Pradesh	40.1	41.0	29.6	42	44	27	32	35	14
2. Assam	78	78	76	66	69	38	**61**	64	37
3. Manipur	23.8	24.2	22.2	13	11	17	16	18	11
4. Mizoram				27	36	11	36	45	19
5. Meghalaya	47.3	50.2	19.0	43	43	37	**59**	61	40
6. Nagaland	NA	NA	NA	17	17	18	26	27	23
7. Sikkim	26.8	27.0	18.6	30	32	12	34	36	21
8. Tripura	39.1	37.8	47.7	30	31	23	31	33	20
All India	**74**	**80**	**52**	**58**	**64**	**40**	**50**	**55**	**34**

Source: 1. Compendium of India's Fertility & Mortality Indicators 1971 to 2007 - (Based on Sample Registration System (SRS)).
SRS became operational Mizoram only 1995.

2. SRS Bulletin, January, 2011
IMR for smaller states (with the exception of Assam) are based on three-years period (2007-09)

Table 6: Percentage of Children fully immunized – (BCG, measles and three doses each of polio / DPT)

State	Fully Immunized (BCG, measles and three doses each of polio / DPT)	No Immunization
1. Arunachal Pradesh	**28.4**	**24.1**
2. Assam	**31.4**	**15.2**
3. Manipur	46.8	6.5
4. Meghalaya	**32.9**	**16.5**
5. Mizoram	46.4	7.0
6. Nagaland	**21.0**	**18.4**
7. Sikkim	69.6	3.2
8. Tripura	49.7	**14.7**
All India	**43.5**	**5.1**

Source: National Family Health Survey – III (2005-06), MOHFW/GOI – (National Health Profile 2010)

Table 7: Maternal Mortality Ratio

States	2001-2003	2004-06
1. Arunachal Pradesh	NA	NA
2. Assam	**490**	**480**
3. Manipur	NA	NA
4. Mizoram	NA	NA
5. Meghalaya	NA	NA
6. Nagaland	NA	NA
7. Sikkim	NA	NA
8. Tripura	NA	NA
All India	**301**	**254**

Note: Per Lakh (100000) Live Birth

Source: Special Bulletin on Maternal Mortality -- ***(National Health Profile 2010 - MoHFW)***

Table 8: Percentage of Deliveries Attended by Trained Personnel / institution births

States	Maternity care (for births in the proceeding 5 years of the survey)	
	Births assisted by a doctor/nurse / LHV / ANM / others	Institutional births (%)
1. Arunachal Pradesh	**30.2**	**28.5**
2. Assam	**31.0**	**22.4**
3. Manipur	59.0	45.9
4. Meghalaya	**31.1**	**29.0**
5. Mizoram	65.4	59.8
6. Nagaland	**24.7**	**11.6**
7. Sikkim	53.7	47.2
8. Tripura	48.8	46.9
All India	**46.6**	**38.7**

Source: National Family Health Survey-III (2005-06), MOHFW/GOI – (National Health Profile 2010)

Table 9: Ante Natal Care

States	Ante Natel care indicators five year proceeding the NFHS survey (2005-06)		
	Mothers who had at least 3 antenatal care visits for their last birth (%)	**Mothers who consumed IFA for 90 days or more when they were pregnant with their last child (%)**	***Mothers who received two or more TT injections during the pregnancy (%).***
1. Arunachal Pradesh	**35.5**	**11.2**	40.1
2. Assam	**39.3**	**16.2**	65.4
3. Manipur	68.6	**13.1**	79.2
4. Meghalaya	54.0	**16.7**	51.8
5. Mizoram	59.3	24.7	51.4
6. Nagaland	**32.7**	**3.5**	50.7
7. Sikkim	70.1	38.7	81.1
8. Tripura	60.0	**18.0**	74.9
All India	**52.0**	**23.1**	**76.3**

Source: National Family Health Survey-III (2005-06), MOHFW/GoI
(National Health Profile 2010)

Table 10: Nutrition Status of Women and Children

States	Children under 5 years who are under weight (%)	Children age group 6-59 months who are anaemic (%)	Women whose body mass index is below normal (underweight) (%)	Ever Married Women age 15-49 yrs who are anaemic (%)
1. Arunachal Pradesh	32.5	56.9	16.4	50.6
2. Assam	36.4	69.6	36.5	**69.5**
3. Manipur	22.1	41.1	14.8	35.7
4. Meghalaya	**48.8**	64.4	14.6	47.2
5. Mizoram	19.9	44.2	14.4	38.6
6. Nagaland	25.2	NA	17.4	NA
7. Sikkim	19.7	59.2	11.2	**60.0**
8. Tripura	39.6	62.9	36.9	**65.1**
All India	**42.5**	**69.5**	**35.6**	**55.3**

Source: National Family Health Survey-Ill (2005-06). MOHFW/GOI
(*National Health Profile 2010)*

Table 11: Overall Sex Ratio (Total Population) and Child Sex Ratio in age group 0-6

States	Overall Sex Ratio *(Total Population)*		Child Sex Ratio *(0-6 years)*	
	2001	**2011**	**2001**	**2011**
1. Arunachal Pradesh	893	920	964	**960**
2. Assam	935	954	965	**957**
3. Manipur	974	987	957	**934**
4. Meghalaya	972	986	973	**970**
5. Mizoram	935	975	964	971
6. Nagaland	900	931	964	**944**
7. Sikkim	875	889	963	**944**
8. Tripura	948	961	966	**953**
All India	**933**	**940**	**927**	**914**

Note: Sex Ratio (Females per thousand Males)
Source: Census 2011 – Provisional Population Totals Paper 1

Table 12: Incidence of Foeticide and Infanticide

States	Foeticide		Infanticide	
	2005	2008	2005	2009
1. Arunachal Pradesh	0	0	0	0
2. Assam	1	0	1	0
3. Manipur	0	0	0	0
4. Meghalaya	0	0	1	2
5. Mizoram	0	0	0	0
6. Nagaland	0	0	0	0
7. Sikkim	1	0	1	0
8. Tripura	0	0	0	1
All India	**86**	**73**	**108**	**186**

Source: National Health Profile 2010 – MOHFW

Table 13 A: Cases and Deaths due to Malaria, Acute Respiratory Infections (ARI), and Acute Diarrhoeal diseases – 2008.

States	Malaria		Acute Respiratory Disease		Acute Diarrhoeal Disease	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
All India	**1526210**	**1055**	**27451421**	**5321**	**11408666**	**2865**
1. Arunachal Pradesh	29146	27	43021	1	37546	2
2. Assam	83939 **(5.49)**	86 **(8.15)**	94214 (0.34)	1457 **(27.38)**	93712 (0.82)	745 **(26.00)**
3. Manipur	708	2	21705	6	17426	4
4. Meghalaya	39616 (2.5)	73 **(6.9)**	213692	7	133478	39
5. Mizoram	7361	91	34181	31	20143	41
6. Nagaland	5078	19	25231	0	15922	0
7. Sikkim	38	0	72428	9	42506	3
8. Tripura	25894	51	242800	43	126471	39

Source : National Health Profile 2010.
Figures in brackets show percentages to total number of cases and deaths.

Table 13 B: Observed HIV Prevalence levels (percentage)

States	Number of sites in 2008	2002	2005	2007	2008
1. Arunachal Pradesh	ANC 6	0.00	0.43	0.00	0.59
	STD 7	0.00	0.00	0.00	0.54
2. Assam	ANC 16	0.00	0.00	0.00	0.00
	STD 9	0.49	0.89	0.50	0.52
3. Manipur	ANC 14	1.00	1.00	0.75	0.50
	STD 2	9.60	12.20	4.08	3.15
4. Meghalaya	ANC 74	0.00	0.00	0.00	0.00
	STD 3	0.45	0.00	1.62	0.00
5. Mizoram	ANC 8	1.01	0.88	0.75	0.50
	STD 2	**2.60**	**3.00**	**6.80**	**6.40**
6. Nagaland	ANC 19	1.26	1.50	0.60	1.03
	STD 1	2.43	3.48	3.42	3.32
7. Sikkim	ANC 3	0.13	0.25	0.00	0.00
	STD 1	0.00	0.86	0.00	2.88
8. Tripura	ANC 2	0.00	0.00	0.25	0.00
	STD 7	1.40	0.80	0.40	1.20

Notes:

* **HIV Prevalence values in States with more than 3 sites are median values, while in States/UTs with 3 or less than 3 sites, the values are mean values.**
* **Sites with 75% coverage of desired sample size (STD: 250 & ANC: 400) are included for analysis**

Source: National Health Profile 2010 Table No. 3.1.1.23 based on data from National Aids Control Organization.

Table 14: Shortfall Health Infrastructure -- As per 2001 Population in India *(As on March, 2009)*

States	Total Population in Rural Area	Tribal Population in Rural Area	Sub-Centres			PHCs			CHCs		
			R	P	S	R	P	S	R	P	S
1. Arunachal Pradesh	870087	606278	254	592		39	116		9	44	
2. Assam	23216288	3154546	5063	4592	**471**	826	844		206	108	**98**
3. Manipur	1590820	705912	412	420		64	72		16	16	
4. Meghalaya	1864711	1682670	597	401	**196**	90	105		22	28	
5. Mizoram	447567	430883	146	370		22	57		5	9	
6. Nagaland	1647249	1544022	535	397	**138**	80	123		20	21	
7. Sikkim	480981	101909	109	147		17	24		4	0	**4**
8. Tripura	2653453	967997	659	579	**80**	104	76	**28**	26	11	**15**
All India	**742490639**	**7733597**	**158792**	**145894**	**20534**	**26022**	**23391**	**4504**	**6491**	**4510**	**2135**

Note: R – Required (as per norms).
P – In Position.
S -- Shortfall

Source : Rural Health Statistics in India 2009 (MOHFW).

Table 15 A: Human Resources for Health -- Shortages

States	Health worker (female)/ ANMs at SCs & PHCs			Health workers (male)/ MPWs at (M) at SCs			Health Assistants (female)/ LHVs at PHCs			Health assistants (male) at PHCs		
	R	**P**	**S**	**R**	**P**	**S**	**R**	**P**	**S**	**R**	**P**	**S**
1. Arunachal Pradesh	708	256	**452**	592	156	**436**	116	0	**116**	116	0	**116**
2. Assam	5436	8875		4592	359	**4233**	844	NA	NA	844	NA	NA
3. Manipur	492	1045		420	420	**0**	72	70	**2**	72	63	**9**
4. Meghalaya	506	611		401	84	**317**	105	75	**30**	105	87	**18**
5. Mizoram	427	428		370	398		57	48	**9**	57	54	**3**
6. Nagaland	520	822		397	241	**156**	123	31	**92**	123	15	**108**
7. Sikkim	171	314		147	133	**14**	24	24	0	24	1	**23**
8. Tripura	655	432	**223**	579	282	**297**	76	17	**59**	76	28	**48**
All India	**169285**	**190919**	**12414**	**145894**	**57439**	**88483**	**23391**	**18168**	**5934**	**23391**	**16083**	**9562**

Note: R – Required (as per norms).
P – In Position.
S -- Shortfall

Source : Rural Health Statistics in India 2009 (MOHFW).

Table 15 B: Human Resources for Health -- Shortages (*Continued*)

States	Doctors at PHCs			Specialists at CHCs			Radiographers at CHCs			Pharmacists at PHCs and CHCs			Lab Technicians at PHCs and CHCs		
	R	P	S	R	P	S	R	P	S	R	P	S	R	P	S
1. Arunachal Pradesh	116	87	**29**	176	9	**167**	44	7	**37**	160	66	**94**	160	52	**108**
2. Assam	844	344	**500**	432	142	**290**	108	NA	NA	952	291	**661**	952	557	**395**
3. Manipur	72	117		64	2	**62**	16	11	**5**	88	128		88	116	
4. Meghalaya	105	128		112	4	**108**	28	25	**3**	133	136		133	130	**3**
5. Mizoram	57	51	**6**	36	0	**36**	9	8	**1**	66	53	**13**	66	37	**29**
6. Nagaland	123	144		84	2	**82**	21	1	**20**	144	113	**31**	144	102	**42**
7. Sikkim	24	51		0	7		0	9		24	24	**0**	24	32	
8. Tripura	76	109		44	4	**40**	11	11		87	56	**31**	87	50	**37**
All India	**23391**	**23982**	**3789**	**18040**	**5789**	**12263**	**4510**	**1867**	**2553**	**27901**	**20967**	**8347**	**27901**	**12904**	**15244**

Note 1. : Specialists in CHCs include Surgeons, Obstetricians and Gynaecologists and Paediatrician.

Note 2. : R – Required (as per norms).
P – In Position.
S – Shortfall

Source : Rural Health Statistics in India 2009 (MOHFW).

CHAPTER 5
BASIC AMENITIES

The availability of basic amenities of drinking water, sanitation, electricity in an household have an impact on all aspects of well being which have been detailed in the earlier chapters of this report.

Provision of clean drinking water, sanitation and a clean environment are vital to improve the health of our people and to reduce incidence of diseases and deaths. Children are less likely to miss school if they are not troubled by regular bouts of diarrhoea; electricity in households is basic for studies at home. Women and girls spend hours fetching water and that drudgery should be unnecessary. Drudgery is undesirable in itself and it also takes away other opportunities for self development.

Data on basic amenities such as drinking water, sewerage, sanitation, electricity has been collected by NSSO Rounds ever since the 7th Round (Oct 1953-March 1954) **For the purpose of present study we are comparing the results of the 49th Round (Jan to June 1993) with that of the 65th Round (2008-09).**

SECTION I

Access to Drinking Water

Drinking water is less than 1% of the total water demand and should have first priority among all uses of water. The Study of drinking water facility requires analysing the access to different sources of drinking water and sufficiency of drinking water. **It reveals the extent to which government's civic water supply system (mainly tap) has reached the corners of the country.**

The accessibility component has other aspects such as distances travelled to the source of drinking water and whether the source is shared with other households or community or is it for exclusive use of the households.

a) Changes in shares of different sources of Drinking water over the period 1993 to 2008-09: -- (Tables 1,2 3,4)

During this time period there has been an increase in the use of tap water and tube-well / hand-pump in both rural and urban area. (accounting for two largest sources of water at present). There has been a corresponding decrease in use of well water in this period. The NSSO 65th Round has added a category of "protected" well water.

ALL INDIA

In **rural areas** there has been gradually increase in the share of both sources, tap and tube-well / hand-pump and a corresponding decrease in the share of well. **In 1993** only **19 percent** of rural households used tap as source of drinking water **(Table 1)** which rose to cover nearly **30 percent** of rural households in **2008-09 (Table 2)** Similarly the share of tube-well / hand-pump which was 45 percent of rural households in 1993 rose to nearly 55 percent in 2008-09.

The situation in urban areas showed a similar pattern with the share of tap as major source of drinking water increasing from 70 percent in 1993 (Table 3) to 74 percent in 2008-09 (Table 4). A marginal decline in the share of tube-well / hand-pump was noticed during this period: from 19 percent in 1993 to 18 percent in 2008-09.

NORTH EAST STATES

1. Rural areas (Table 2)

With respect to NE States there is a great degree of variation. As per data of 2008-09 while tap water has reached **79.8%** of rural households in Arunachal Pradesh, its coverage is only 6.3% in rural Assam. The percentage for Mizoram **(14.6 percent)** is also much below the national average of 30 percent. In Meghalaya and Sikkim the coverage with respect to tap water is higher than national average **(50.6 %** and **67.4%** respectively)

2. Urban Areas (Table 4)

In urban areas at the all India level tap was the major source of drinking water in 74 % of households. **The picture for Assam (36.66 %) and (Nagaland 25.7 %) is dismal.** On the other hand Arunachal Pradesh, Meghalaya, Sikkim show much higher tap water coverage than the national average (87.2 %, 95.6%, 98.2% respectively).

b) Availability of drinking water within household / premises is a better form of facility as the household need not waste time and energy in fetching water.

There has been considerably improvement in availability of drinking water within household / premises. At the national level, in 1993, only 34 % of household in rural areas had drinking water within premises which increased to 40.5% in 2008-09. In urban areas, in 1993 66% of household had drinking water within premises which increased to 75% in 2008-09 **(Table 5).**

The situation in 2008-09 for Manipur, Mizoram and Meghalaya shows a poor picture. As against 40.5% of rural household having drinking water in premises at all India level, **the percentage is much lower for Manipur (19%), Mizoram (10.8%), and Meghalaya (21.7%).**

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Table 1: Household by sources of Drinking water 1993 — Rural

(Percentages)

States	Tap	Tube well /hand pump	Well	Tank/pond (reserved for drinking)	Other tank/ pond	River/ canal/ lake	Spring	Others	All
1. Arunachal Pradesh	66.3	3.8	3.7	-	-	3.6	19.6	2.9	100
2. Assam	**8.4**	46.6	31.6	3.7	4.8	3.7	0.6	0.8	100
3. Manipur	39.2	6.9	6.9	13.2	3.9	16.3	11.9	1.5	100
4. Mizoram	19.9	7.6	3.0	5.5	0.3	6.8	54.5	2.4	100
5. Meghalaya	25.1	4.6	19.6	4.3	1.3	3.0	42.2	-	100
6. Nagaland	91.7	1.1	-	6.7	0.4	-	-	-	100
7. Sikkim	77.0	-	0.3	3.0	1.8	-	17.5	0.4	100
8. Tripura	23.4	33.6	35.1	0	2.8	1.2	0	3.8	100
All India	**18.9**	**44.5**	**31.7**	**1.3**	**0.8**	**1.7**	**0.9**	**0.3**	**100**

Source: 49th Round NSSO Report No. 429: Housing Conditions in India (Table 27) - conducted during the period: (January 1993 - June 1993); calculated values.

Table 2: Household by sources of Drinking water 2008 -09 — Rural

(Percentages)

Major sources of drinking water													
SI. No	**States**	**Bottled water**	**tap**	**Tube - well /hand pump**	**Protected well**	**Unprotected well**	**Tank/pond (reserved for drinking)**	**Other tank/Pond**	**River /Canal /lake**	**Spring**	**Harvested rainwater**	**Others**	**All**
1.	Arunachal-Pradesh	1.3	79.8	11.2	0.7	2.3	0	1.1	2.4	1.1	0	0	100
2.	Assam	0.1	**6.3**	65.4	10.4	7.8	0.6	3.0	2.8	3.2	0	0.3	100
3.	Manipur	1.0	**24.7**	10.4	3.7	0	14.5	6.2	21.2	16.7	0.1	1.4	100
4.	Meghalaya	0.4	50.6	9.4	6.0	5.3	3.8	0.6	1.7	22.1	0	0	100
5.	Mizoram	0	**14.6**	4.8	0.4	0	2.7	1.2	5.6	68.5	0.6	1.6	100
6.	Nagaland	0.1	28.6	5.2	29.9	10.8	15.0	3.4	1.2	5.3	0.4	0	100
7.	Sikkim	0	67.4	0	0	0	1.3	0	0	31.3	0	0	100
8.	Tripura	0.2	27.4	43.7	5.3	18.3	0.9	0.4	2.1	0.3	0	1.3	100
	All India	**0.5**	**30.1**	**54.7**	**5.5**	**6.3**	**0.8**	**0.3**	**0.7**	**0.7**	**0.1**	**0.3**	**100**

Source : 65th Round NSSO Report No. 535: Housing Condition and Amenities in India (Statement 3.1.1) – conducted in (July 2008- June 2009): calculated values.

Table 3: Household by sources of Drinking water 1993 — Urban

(Percentages)

Major sources of drinking water										
SI. No	**States**	**Tap**	**Tube-well/hand pump**	**well**	**Tank/pond (reserved for drinking)**	**Other tank/ pond**	**River/ canal/ lake**	**Spring**	**Others**	**All**
1.	Arunachal Pradesh	100	-	-	-	-	-	-	-	100
2.	Assam	43.6	39.8	14.0	0.1	1.9	0.2	0.2	0	100
3.	Manipur	68.4	7.4	0.5	2.0	9.3	9.7	2.7	-	100
4.	Mizoram	32.8	2.3	0.2	7.2	0.2	2.4	48.1	6.8	100
5.	Meghalava	85.4	0.2	12.7	0.5	0.6	-	0.6	-	100
6.	Nagaland	81.4	9.6	7.7	1.0	0.2	-	-	-	100
7.	Sikkim	97.7	-	-	-	-	2.1	-	0.2	100
8.	Tripura	66.8	18.3	12.3	0.6	0.3	-	0.3	1.4	100
	All India	**70.4**	**18.5**	**8.6**	**0.4**	**0.4**	**0.1**	**0.1**	**1.4**	**100**

Source: 49th Round NSSO Report No. 429: Housing Conditions in India (Table 27) - conducted during the period: (January 1993 - June 1993); calculated values.

Table 4: Household by major sources of Drinking water 2008 -09 — Urban

(Percentages)

Major sources of drinking water													
SI. No	**States**	**Bottled water**	**tap**	**Tube well/hand pump**	**Protected well**	**Unprotected well**	**Tank/pond (reserved for drinking)**	**Other tank/pond**	**River/ canal/ lake**	**Spring**	**Harvested rainwater**	**Others**	**All**
1.	Arunachal-Pradesh	1.2	87.2	3.8	6.7	0.7	0.3	0	0	0.1	0	0	100
2.	Assam	0.3	**36.6**	41.1	14.7	5.1	0	0.1	0	0.2	0	1.9	100
3.	Manipur	1.0	65.6	7.4	1.2	0.2	13.0	3.4	4.3	2.5	0	1.4	100
4.	Meghalaya	1.6	95.6	0.7	1.2	0.2	0	0	0	0.7	0	0	100
5.	Mizoram	0.2	72.0	0.1	0	0	2.5	1.0	0.3	20.7	2.3	0.9	100
6.	Nagaland	0.2	**25.7**	2.6	24.2	6.9	15.2	6.2	0.9	3.5	12.5	1.9	100
7.	Sikkim	0.5	98.2	0	0	0	0	0	0	1.3	0	0	100
8.	Tripura	0	60.6	33.7	2.6	0.7	0	0	0	0	0	2.4	100
	All India	**2.7**	**74.3**	**17.5**	**2.1**	**1.2**	**0.2**	**0.1**	**0**	**0.1**	**0**	**1.9**	**100**

Source : 65th Round NSSO Report No. 535: Housing Condition and Amenities in India (Statement 3.1.1) – conducted in (July 2008- June 2009): calculated values.

Table 5: Households who got Drinking water within premises 1993, 2008 - Rural, Urban

(Percentages)

Sl. No.	States	Rural		Urban	
		1993	2008	1993	2008
1	Arunachal-Pradesh	39.9	72.0	91.3	90.1
2	Assam	54.1	63.3	78.5	91.9
3	Manipur	18.8	**19.0**	46.4	46.3
4	Mizoram	1.9	**10.8**	17.0	66.8
5	Meghalaya	16.2	**21.7**	73.3	83.2
6	Nagaland	51.0	46.8	94.6	60.3
7	Sikkim	71.4	63.2	86.8	97.7
8	Tripura	39.4	36.8	73.7	78.8
	All India	**33.6**	**40.5**	**65.6**	**74.5**

Source: 49th Round NSS Report No. 429: Housing Condition and Amenities conducted during period (JAN to June 1993) – Table 27; calculated values.
Source: 65th Round NSS Report No. 535: Housing condition and Amenities in India (Statement 3.5.1) – conducted in (July 2008 - June 2009); calculated values.

SECTION - II

Sanitation: Access to Toilet Facilities

The World Health Organization defines 'sanitation' to include connection to a sewer septic tank system, pour-flush latrine, simple pit or ventilated improved pit latrine, with allowance for acceptable local technologies.

A large percentage of the country's population still either defecate in open or use unsanitary bucket latrines or smelly public toilets as per one estimate. This is true even in urban areas where only a small percent of the population has access to water / flush toilets connected to a sewerage system. This lack of adequate sanitation is responsible for severe health problems. Cholera, dysentery, typhoid, hepatitis infections and many other diseases can be traced to the unsanitary disposal of human excreta.

For the present study the data contained in NSSO Rounds on Housing Conditions and Housing Amenities have been used (49"' Round Jan - June 93) and 65th Round (July 2008 - June 2009).

The National Sample Survey Organization (NSSO) categorizes three distinct types of latrines viz septic rank / Flush, pit and service being used by the households apart from the residual 'others' and the cases of "no latrine" facilities.

A latrine of 'flush system' type is generally considered to be the best among all types of latrine, in respect of hygiene. Then comes the 'septic tank' type latrine which is connected to underground septic chambers. Pit latrine may be taken as next better type of latrine. **Septic tank/flush and pit latrines together may be considered improved sanitation facility. Service latrine which is manually cleaned, is the worst type, in a household, in terms of hygiene.**

The comparison over the period from 1993 to 2008-09 points towards gradual improvement in the availability of sanitation facility, in both rural and urban areas, with the reduction in the share of households without any latrine or that of service latrine users and increase of the shares of pit and septic / flush latrine users.

Types of Latrines used (Tables 1,2,3,4)

ALL INDIA – RURAL

In rural areas, the proportion of households with "no latrine" facility, was found to decline by nearly 21 percentage points in 2008-09. Nearly 86 percent households had "no latrine" facility in 1993 which decreased to nearly 65 percent in 2008-09. **(TabIe 1 and 2)**

ALL INDIA – URBAN

In urban areas at the all India level on the other hand, 31 percent of households had "no latrine" facility in 1993, which decreased to 11 percent of households in 2008-09. (Tables 3 and 4)

NORTH EASTERN STATES

The NE States fare better than the all India average -- the percentage of households having "no latrine" facilities in 2008-09 in **rural areas** is much lower than the national average of 65 percent. It is as low as 1.1 percent (Manipur). 3.1 percent (Nagaland), 3.4 percent (Tripura) (Table 2).

Similarly in **urban areas** as against the national average of 11.3 percent of households having "no latrine" the figures are much lower for NE States: Manipur (0), Mizoram (0), Sikkim (0), Arunachal Pradesh (0.1), Assam (0.9), Tripura (0.9), Nagaland (1.3) (Table 4).

However, the percentage of service latrines in rural areas of NE States is much higher than all India average. As against the national figure of 1.2 percent, the figures for NE States are as high as 9.4 (Manipur), 5.3 (Arunachal Pradesh), 4.3 (Mcghalaya).

The service latrines in urban areas are also higher than the all India average in some of the NE States. As against the national average of 1.6 percent of urban households using service latrines the percentage is as high as 11.6 percent (Arunachal Pradesh) 9.3 (Manipur) and 5.1 (Meghalaya).

With development, the increase in the share of septic tank/flush latrine users during this time period is noticeable: in rural areas the coverage of septic tank / Flush increased by 12 percentage point from 6 percent in 1993 to 18 percent in 2008-09 and in the urban areas the same increased by about 19 percentage point from 58 percent in 1993 to 77 percent in 2008-09.

On the other hand, the proportion of households with service latrine decreased in both rural and urban areas: in rural areas its share decreased from 2 percent in 1993 to 1 percent in 2008-09 and in urban areas the coverage decreased from 7 percent to nearly 2 percent during this time period.

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Table 2: Households by Types of Latrines used (2008) - Rural

(Percentages)

Type of Latrine							
SI. No	**States**	**No Latrine**	**Service**	**Pit**	**Septic Tank/ Flush**	**Others**	**All (including not known and n.r)**
1.	Arunachal Pradesh	16.2	5.3	16.2	23.9	36.5	100
2.	Assam	13.5	2.2	53.5	18.2	11.8	100
3.	Manipur	1.1	9.4	52.7	21.8	14.8	100
4.	Meghalaya	11.4	4.3	67.0	14.8	1.8	100
5.	Mizoram	1.2	1.1	64.3	32.1	1.2	100
6.	Nagaland	3.1	2.2	53.8	32.6	6.8	100
7.	Sikkim	2.5	0.1	28.1	68.9	0.5	100
8.	Tripura	3.4	0.9	76.9	5.2	13.2	100
	All India	**65.2**	**1.2**	**14.0**	**17.9**	**1.2**	**100**

Table 2: Households by Types of Latrines used (2008) - Rural

(Percentages)

Type of Latrine							
Sl. No	**States**	**No Latrine**	**Service**	**Pit**	**Septic Tank/ Flush**	**Others**	**All (including not known and n.r)**
1.	Arunachal Pradesh	16.2	5.3	16.2	23.9	36.5	100
2.	Assam	13.5	2.2	53.5	18.2	11.8	100
3.	Manipur	1.1	9.4	52.7	21.8	14.8	100
4.	Meghalaya	11.4	4.3	67.0	14.8	1.8	100
5.	Mizoram	1.2	1.1	64.3	32.1	1.2	100
6.	Nagaland	3.1	2.2	53.8	32.6	6.8	100
7.	Sikkim	2.5	0.1	28.1	68.9	0.5	100
8.	Tripura	3.4	0.9	76.9	5.2	13.2	100
	All India	**65.2**	**1.2**	**14.0**	**17.9**	**1.2**	**100**

Source: 65th Round NSS Report No. 535: Housing Condition and Amenities in India (Statement 3.9.1) - (July 2008- June 2009); calculated values.

Table 3: Households by Type of Latrine used (1993) - Urban

(percentages)

SI No	States	No latrine	Service latrine	Septic tank	Flush system	Others	n.r.	All
1.	Arunachal Pradesh	6.0	8.9	37.0	19.9	28.2	-	100
2.	Assam	7.0	14.7	55.1	3.2	19.8	0	100
3.	Manipur	5.1	11.1	13.0	0.2	70.7	-	100
4.	Mcghalaya	1.3	17.9	54.5	6.5	19.9	-	100
5.	Mizoram	0.4	0.1	20.8	0.3	78.4	-	100
6.	Nagaland	0.9	28.2	38.9	5.7	26.3	-	100
7.	Sikkim	8.5	28.4	47.0	4.4	11.7	-	100
8.	Tripura	0.6	7.9	49.3	0.6	41.6	-	100
	All India	**30.6**	**7.4**	**29.6**	**28.5**	**3.8**	**0.1**	**100**

Source : 49Round NSS Report No. 429: Hosing Conditions in India (Statement 10) - conducted during the period (January 1993-June 1993) : calculated values

Table 4: Households by Types of Latrines used (2008) - Urban

(Percentage)

Type of Latrine							
SI. No	**States**	**No Latrine**	**Service**	**Pit**	**Septic Tank/ Flush**	**Others**	**All (including not known and n.r)**
1.	Arunachal Pradesh	0.1	11.6	12.5	61.5	13.2	100
2.	Assam	0.9	0.2	12.2	84.8	1.4	100
3.	Manipur	0	9.3	31.1	51.6	8.0	100
4.	Mizoram	0	0.2	16.7	82.3	0.9	100
5.	Meghalaya	0.2	5.1	15.3	79.1	0.3	100
6.	Nagaland	1.3	1.5	17.5	70.1	6.3	100
7.	Sikkim	0	0	1.1	98.9	0	100
8.	Tripura	0.9	0	45.7	48.6	4.8	100
	All India	11.3	1.6	8.0	77.3	1.0	100

Source: 65th Round NSS Report No. 535: Housing condition and Amenities in India (Statement 3.9.1) - (July 2008- June 2009); calculated values

SECTION III

Electricity Facility for Domestic use in North East States

Electricity is considered an important facility to the households and has bearing on the quality of life of the people. **The NSSO Rounds on Housing Conditions and Amenities have been collecting data on availability of electricity to households for domestic use, which might be either for lighting or cooking or for both.**

All India

Over the years electricity coverage in both rural and urban areas has increased and the rural - urban divergence in electricity coverage has also narrowed down. In **1993** (49th NSSO Round) nearly **37%** of the rural households at the national level had electricity which was nearly 44 percentage points lower compared to the proportion of households with electricity in urban areas **(81%) (Table 1)**.

In **2008-09** (65th NSSO Round) **66%** of rural households had electricity for domestic use. In the urban areas this proportion was **96%.** (The gap between urban-rural access decreasing to 30 percentage points in 2008 compared to 44 percent points in 1993). **(Table 1)**

NE States:

With the exception of Assam, North East States fare better **in the context of rural households** having electricity for domestic use. **Assam with a lower access of only 40.2% rural households needs to leverage central government assistance available under Rajiv Gandhi Gramin Vidyutikaran Yojana (RGGVY).** The percentage of rural households having electricity in the remaining 7 States is much higher than the national average (66%); Nagaland (99.0%), Sikkim (95.8%), Mizoram (81.9%), and Manipur (86.8%). **(Table 1)**

Similarly in case of urban households having access to domestic electricity, the North East States fare better than the national average (96.1%). Assam and Tripura need to improve their access in urban areas marginally to reach the national average. In Nagaland 100% of urban households have access to domestic electricity. **(Table 1)**

SECTION IV

Household with three basic facilities within premises: drinking water, latrine & electricity for domestic use

All India

Availability of drinking water within premises and latrine along with electricity depict a better living facility. It is seen from **Table 2** that in both rural and urban areas the proportion of households with all the three facilities have increased considerably overtime.

In **rural** areas, in 1993 only about 6% of the household had accessed the all the three facilities which trebled in 2008-09 to cover 18% of the household. In urban areas the proportion of household which enjoyed all three facilities increased from 48% of households in 1993 to cover 68% households in 2008-09.

NE States:

In 2008-09 in terms of **rural** households having access to all the three facilities. Mizoram with the percentage of 10.8, and Manipur (17.8%) fared poorly when compared with the national

average of 18.4%. The remaining North East States fare better than the national levels with as high as 61.8% of rural households of Sikkim and 55.1% of rural households in Arunachal Pradesh having access to all the three facilities.

During 2008-09 while 67.5% of **urban** households had the above mentioned three facilities at the all India level, Manipur (46.2%) and Nagaland (59.6%) fared poorly.

Table 1: Households with electricity for domestic use (for lighting, cooking or for both)

(Percentages)

SI No.	States	1993		2008-09	
		Rural	Urban	Rural	Urban
1.	Arunachal Pardesh	27.3	87.3	77.9	98.5
2.	Assam	15.6	74.0	40.2	94.6
3.	Manipur	58.1	92.6	86.8	99.5
4.	Meghalaya	27.2	89.8	69.8	99.3
5.	Mizoram	61.4	91.3	81.9	99.8
6.	Nagaland	68.4	94.0	99.0	100
7.	Sikkim	65.3	91.9	95.8	99.4
8.	Tripura	30.2	83.5	66.1	95.3
	All India	**36.5**	**80.9**	**66.0**	**96.1**

Source: i) 49th Round Report No. 429: Housing Conditions conducted during the period: (January 1993-June, 1993); calculated values

ii) 65th Round Report No.535 (Statement 3.13.1): Housing Condition and Amenities in India-(July 2008-June 2009) ; calculated values

Table 2: Household with three basic facilities within premises: drinking water, latrine & electricity for domestic use

(Percentages)

SI No.	States	1993		2008-09	
		Rural	Urban	Rural	Urban
1.	Arunachal Pardesh	14.4	75.3	55.1	88.5
2.	Assam	12.3	65.2	30.3	87.5
3.	Manipur	20.4	49.1	17.8	46.2
4.	Meghalaya	9.4	66.8	16.3	83.1
5.	Mizoram	2.2	18.2	10.8	66.6
6.	Nagaland	30.6	82.0	45.3	59.6
7.	Sikkim	26.7	61.4	61.8	95.5
8.	Tripura	15.1	64.0	27.9	77.3
	All India	**5.6**	**47.6**	**18.4**	**67.5**

Source: i) 49th Round Report No. 429 (Table 36): Housing Conditions conducted during the period: (January 1993-June, 1993); calculated values

ii) 65th Round Report No.535 (Statement 3.15.1): Housing Condition and Amenities in India-(July 2008-June 2009) ; calculated values

सत्यमेव जयते

Government of India
Ministry of Development of North Eastern Region
New Delhi
Website: www.mdoner.gov.in